#### NEW RIVER BASIN

### 03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, NC

LOCATION.--Lat 36°23'36", long 81°24'25", Ashe County, Hydrologic Unit 05050001, on right bank 600 ft upstream from bridge on State Highways 16 and 88, 0.2 mi downstream of Bear Creek, and 4 mi southeast of Jefferson.

DRAINAGE AREA.--205 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1925-26(M), 1928-30(M), 1931-32, 1933-35(M), 1941-42(m), 1944(m). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft above NGVD of 1929. Prior to Oct. 14, 1934, nonrecording gage on bridge 400 ft downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 15, 1916, reached a stage of 18.0 ft, from floodmarks witnessed by local resident; discharge, 35,200 ft<sup>3</sup>/s.

### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

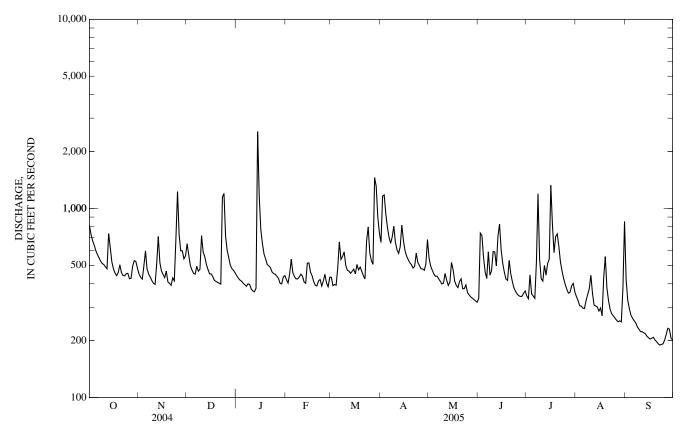
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	813	449	e650	440	420	433	661	546	334	344	341	421
2	729	432	568	427	402	390	1,160	495	740	333	326	327
3	674	423	499	417	452	396	1,180	471	718	445	306	295
4	639	497	472	412	538	393	934	450	551	353	304	272
5	598	596	453	402	455	484	795	438	461	344	297	262
6	570	478	449	395	436	665	705	438	426	335	296	255
7	547	449	494	387	424	537	654	424	589	518	326	248
8	526	433	465	399	423	557	707	411	444	1,190	351	237
9	511	415	477	396	434	589	804	398	467	537	376	229
10	505	401	717	375	449	501	660	402	592	424	443	223
11	491	397	587	366	438	471	604	453	588	413	355	223
12	479	509	555	362	408	466	578	417	496	499	308	220
13	736	711	506	378	402	453	628	391	713	444	305	217
14	622	516	476	2,550	513	465	815	407	826	512	301	211
15	522	466	451	1,160	515	476	678	518	602	538	286	207
16	479	447	450	770	460	451	597	474	511	1,320	297	204
17	455	430	436	650	440	506	558	412	459	819	270	206
18	441	e466	417	573	410	473	536	391	423	583	432	208
19	458	408	411	e540	392	490	516	381	416	709	556	201
20	503	402	e406	e505	389	464	504	410	531	733	380	197
21	457	392	e402	496	413	440	483	424	451	630	325	192
22	442	e429	e398	486	421	423	493	376	409	522	293	189
23	440	414	1,140	461	389	671	579	376	379	466	277	191
24	451	694	1,200	e452	413	798	516	394	364	426	270	192
25	454	1,230	711	e448	448	581	499	358	352	396	263	201
26 27 28 29 30 31	425 427 494 530 524 482	727 597 597 541 e562	600 548 498 480 470 455	e438 427 402 399 433 441	403 385 433 	529 505 1,450 1,310 900 741	479 479 470 508 683	349 340 336 329 324 319	345 342 343 356 366	373 356 360 390 401 361	256 251 254 251 380 853	215 232 230 206 202
TOTAL	16,424	15,508	16,841	16,787	12,105	18,008	$19,463 \\ 649 \\ 1,180 \\ 470 \\ 3.16 \\ 3.53$	12,652	14,594	16,074	10,529	6,913
MEAN	530	517	543	542	432	581		408	486	519	340	230
MAX	813	1,230	1,200	2,550	538	1,450		546	826	1,320	853	421
MIN	425	392	398	362	385	390		319	334	333	251	189
CFSM	2.58	2.52	2.65	2.64	2.11	2.83		1.99	2.37	2.53	1.66	1.12
IN.	2.98	2.81	3.06	3.05	2.20	3.27		2.30	2.65	2.92	1.91	1.25
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1925 - 2005	BY WATE	R YEAR (W	Y)			
MEAN	354	404	406	467	512	582	563	453	391	334	351	336
MAX	901	1,889	797	1,346	1,173	1,316	1,350	1,052	1,036	904	2,613	1,556
(WY)	(1991)	(1978)	(1958)	(1995)	(1998)	(1979)	(1983)	(1973)	(1992)	(1941)	(1940)	(2004)
MIN	111	124	146	140	188	222	236	220	158	111	93.7	99.5
(WY)	(2001)	(1932)	(1934)	(1940)	(2001)	(1988)	(1986)	(2001)	(1988)	(1930)	(1925)	(1954)

# NEW RIVER BASIN

# 03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS	5 1925 - 2005
ANNUAL TOTAL	187,777		175,898			
ANNUAL MEAN	513		482		429	
HIGHEST ANNUAL MEAN					669	1949
LOWEST ANNUAL MEAN					215	2002
HIGHEST DAILY MEAN	10,500	Sep 8	2,550	Jan 14	27,700	Aug 14, 1940
LOWEST DAILY MEAN	173	Aug 20	189	Sep 22	65	Sep 9, 1925
ANNUAL SEVEN-DAY MINIMUM	184	Aug 17	195	Sep 19	72	Aug 21, 1925
MAXIMUM PEAK FLOW		C	4,050	Jan 14	52,800*	Aug 14, 1940
MAXIMUM PEAK STAGE			6.46	Jan 14	22.50	Aug 14, 1940
INSTANTANEOUS LOW FLOW			185	Sep 22	52*	Dec 24, 1943
ANNUAL RUNOFF (CFSM)	2.50		2.35		2.09	
ANNUAL RUNOFF (INCHÉS)	34.07		31.92		28.40	
10 PERCENT EXCEEDS	673		698		705	
50 PERCENT EXCEEDS	415		447		345	
90 PERCENT EXCEEDS	250		290		168	

\* See REMARKS. e Estimated.



## 03439000 FRENCH BROAD RIVER AT ROSMAN, NC

LOCATION.--Lat 35°08'36", long 82°49'29", Transylvania County, Hydrologic Unit 06010105, on left bank 50 ft upstream from bridge on U.S. Highway 178 at Rosman, 1.0 mi upstream from East Fork, and at mile 216.4.

DRAINAGE AREA.--67.9 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1907 to June 1909, October 1935 to current year. Monthly discharge only for some periods published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1908(M). WSP 1910: 1936(M), 1938(M), 1939-40, 1942-43, WDR NC-93-1: 1993(M).

GAGE.--Water-stage recorder. Datum of gage is 2,173.83 ft above NGVD of 1929. Prior to June 30, 1909, nonrecording gage at site 500 ft downstream at different datum. Jan. 1, 1936, to July 6, 1937, nonrecording gage at present site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for period of record result of freezeup. Minimum daily discharge occurred several days in Sept. and Oct. 1954. Minimum discharge for current water year also occurred Sept. 25, 26.

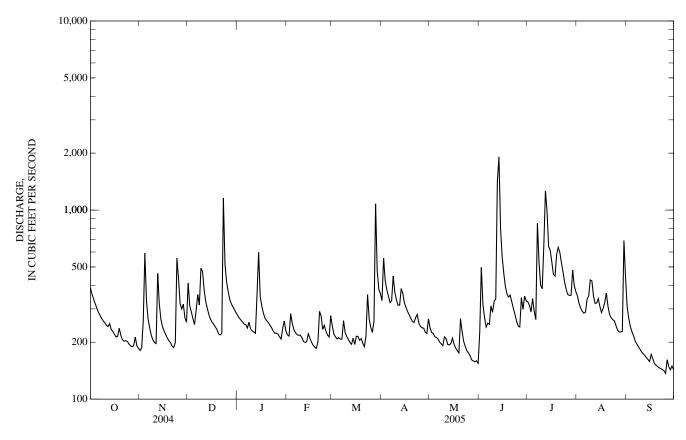
EXTREMES OUTSIDE PERIOD OF RECORD. -- Flood of July 1916 reached a stage of 13.9 ft, from floodmarks.

### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	181	411	276	219	243	332	238	225	327	351	309
2	360	187	311	269	216	220	558	225	498	314	320	268
3	338	261	289	261	283	213	423	223	317	289	303	242
4	320	592	266	256	251	208	379	214	270	340	291	227
5	303	331	248	249	233	211	351	211	240	291	285	217
6	288	265	296	247	225	208	325	208	252	264	288	203
7	278	238	357	238	219	208	331	200	249	852	337	196
8	268	217	314	256	218	260	447	196	311	532	352	190
9	259	206	494	235	218	225	368	192	288	401	427	184
10	254	199	473	230	212	214	335	213	329	384	422	178
11	246	197	378	227	202	207	314	209	339	650	351	174
12	242	462	328	223	199	200	314	195	1,420	1,260	321	170
13	251	320	301	358	201	195	384	193	1,910	988	323	166
14	234	265	279	597	222	210	362	197	800	641	340	162
15	228	242	264	348	210	195	322	210	566	612	309	158
16	220	229	255	310	200	215	305	195	463	531	287	172
17	213	219	248	284	193	214	290	186	394	457	302	164
18	215	211	241	268	188	205	278	181	360	447	323	154
19	237	204	233	260	185	209	268	176	347	582	364	151
20	218	199	221	254	200	198	258	266	355	634	312	149
21	206	190	218	247	291	190	254	227	327	596	282	146
22	202	187	223	239	276	216	270	202	e302	527	270	145
23	204	199	1,160	230	234	357	280	190	e280	470	263	143
24	202	556	518	223	246	265	252	180	258	415	260	141
25	196	435	417	224	229	239	242	176	244	379	245	137
26 27 28 29 30 31	191 189 191 213 192 186	319 300 318 269 255	371 336 319 308 296 285	221 214 208 237 259 230	218 213 276 	225 258 1,080 481 381 361	238 237 226 223 266	169 161 159 158 159 155	241 344 298 351 331	357 353 355 481 399 370	232 227 226 228 689 442	162 148 143 150 143
TOTAL	7,532	8,253	10,658	8,178	6,277	8,311	9,432	6,064	12,909	15,498	9,972	5,292
MEAN	243	275	344	264	224	268	314	196	430	500	322	176
MAX	388	592	1,160	597	291	1,080	558	266	1,910	1,260	689	309
MIN	186	181	218	208	185	190	223	155	225	264	226	137
CFSM	3.58	4.05	5.06	3.89	3.30	3.95	4.63	2.88	6.34	7.36	4.74	2.60
IN.	4.13	4.52	5.84	4.48	3.44	4.55	5.17	3.32	7.07	8.49	5.46	2.90
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1908 - 2005,	@ BY WAT	ER YEAR (	WY)			
MEAN	176	205	246	280	314	332	320	260	220	180	186	174
MAX	734	635	489	672	648	787	582	551	882	624	543	848
(WY)	(1965)	(1993)	(1993)	(1937)	(1939)	(1979)	(1983)	(1909)	(1909)	(1989)	(1994)	(2004)
MIN	42.2	56.7	72.6	72.0	130	135	108	114	79.8	75.8	65.3	43.6
(WY)	(1955)	(1955)	(1940)	(1981)	(1963)	(1988)	(1986)	(1941)	(1988)	(1986)	(1954)	(1954)

# 03439000 FRENCH BROAD RIVER AT ROSMAN, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1908 - 2005 <sup>@</sup>
ANNUAL TOTAL	103,637	108,376	
ANNUAL MEAN	283	297	239
HIGHEST ANNUAL MEAN			370 1949
LOWEST ANNUAL MEAN			136 1981
HIGHEST DAILY MEAN	5,330 Sep 8	1,910 Jun 13	5,630 Oct 4, 1964
LOWEST DAILY MEAN	118 Jul 22	137 Sep 25	37* Sep 25, 1954
ANNUAL SEVEN-DAY MINIMUM	131 Aug 17	145 Sep 19	38 Sep 23, 1954
MAXIMUM PEAK FLOW		3,420 Jun 12	13,500 Oct 4, 1964
MAXIMUM PEAK STAGE		7.90 Jun 12	14.95 Oct 4, 1964
INSTANTANEOUS LOW FLOW		135* Sep 24	23* Jan 3, 1940
ANNUAL RUNOFF (CFSM)	4.17	4.37	3.52
ANNUAL RUNOFF (INCHES)	56.78	59.38	47.83
10 PERCENT EXCEEDS	413	438	413
50 PERCENT EXCEEDS	208	252	191
90 PERCENT EXCEEDS	144	187	88
<sup>@</sup> See PERIOD OF RECORD.			
* See REMARKS.			
e Estimated.			
C Loumateu.			



## 03441000 DAVIDSON RIVER NEAR BREVARD, NC

LOCATION.--Lat 35°16'23", long 82°42'21", Transylvania County, Hydrologic Unit 06010105, on right bank 150 ft upstream of bridge on State Highway 280, 2.1 mi downstream of Avery Creek, 3.3 mi northeast of Brevard, and at mile 2.2.

DRAINAGE AREA.--40.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to September 1990, October 1993 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage Area. WSP 1336: 1921, 1922 (M), 1923, 1924-25(M), 1926, 1927(M), 1929-32(M).

GAGE.--Water-stage recorder. Datum of gage is 2,115.13 ft above NGVD of 1929 (levels by Tennesse Valley Authority). Prior to May 17, 1934, nonrecording gage at site 50 ft downstream at same datum. Satellite telemetry at station.

REMARKS .-- Records good except those for estimated daily discharges, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1876 reached a stage of 11.9 ft, from studies by Tennessee Valley Authority.

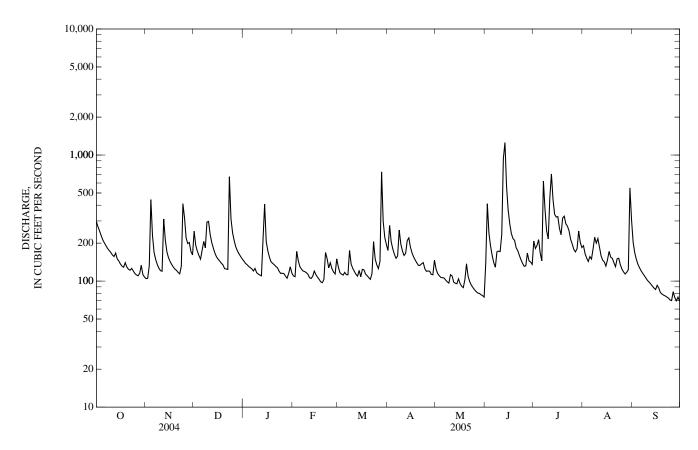
## DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296	105	249	144	110	129	175	124	138	208	191	204
2	269	105	192	139	108	116	276	115	411	181	165	168
3	250	132	173	135	172	114	205	110	e240	192	152	149
4	229	444	159	131	145	112	180	107	e190	213	143	136
5	212	230	149	128	130	117	163	106	e160	167	156	127
6	201	169	176	125	125	113	152	106	e140	145	150	121
7	191	148	206	120	120	112	158	102	129	620	180	115
8	181	136	184	126	119	175	254	99	171	371	223	110
9	175	127	294	117	117	136	197	96	173	251	200	106
10	169	121	297	114	113	126	174	112	171	216	217	101
11	161	120	235	112	106	119	160	110	235	457	186	98
12	157	311	202	110	105	113	166	98	938	708	158	95
13	167	213	182	214	109	109	209	96	1,260	443	147	91
14	150	171	166	407	120	122	220	95	561	339	142	88
15	144	153	156	206	112	108	186	104	367	322	132	86
16	137	143	149	174	108	124	167	96	284	325	148	93
17	131	135	144	154	103	123	155	91	238	263	172	88
18	129	129	139	142	99	114	147	89	218	233	155	81
19	140	125	134	138	97	110	139	103	211	316	152	79
20	129	122	126	135	103	106	133	137	184	327	140	77
21	124	117	125	131	169	103	133	109	174	284	130	76
22	122	114	124	128	150	114	137	99	160	273	150	75
23	126	132	673	e120	127	205	140	93	147	250	152	73
24	120	410	311	e115	140	150	125	89	138	214	135	71
25	115	318	242	115	125	135	119	85	131	196	124	70
26 27 28 29 30 31	112 110 115 133 113 108	220 199 202 172 161	209 187 174 164 157 150	115 110 105 115 130 116	118 114 150  	126 143 735 297 221 195	120 120 113 112 147	83 80 80 78 77 75	132 167 145 142 136	178 170 181 250 203 184	118 114 117 123 549 307	82 74 70 75 69
TOTAL	4,916	5,384	6,228	${}^{4,371}_{141}_{407}_{105}_{3.49}_{4.02}$	3,414	4,822	4,882	3,044	7,891	8,680	5,328	2,948
MEAN	159	179	201		122	156	163	98.2	263	280	172	98.3
MAX	296	444	673		172	735	276	137	1,260	708	549	204
MIN	108	105	124		97	103	112	75	129	145	114	69
CFSM	3.93	4.44	4.97		3.02	3.85	4.03	2.43	6.51	6.93	4.25	2.43
IN.	4.53	4.96	5.73		3.14	4.44	4.50	2.80	7.27	7.99	4.91	2.71
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1921 - 2005	, <sup>@</sup> BY WAT	ER YEAR (	WY)			
MEAN	95.1	107	131	154	167	183	172	141	113	94.6	98.7	95.6
MAX	379	362	323	374	363	466	349	293	263	285	404	667
(WY)	(1965)	(1980)	(1933)	(1937)	(1939)	(1929)	(1957)	(1923)	(2005)	(1989)	(1928)	(2004)
MIN	18.2	24.5	31.7	37.8	66.5	74.1	57.7	54.6	37.9	37.2	24.0	17.5
(WY)	(1955)	(1955)	(1940)	(1956)	(1941)	(1988)	(1986)	(1941)	(1988)	(1986)	(1925)	(1954)

# 03441000 DAVIDSON RIVER NEAR BREVARD, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS	1921 - 2005 <sup>@</sup>
ANNUAL TOTAL	64,284		61,908			
ANNUAL MEAN	176		170		129	
HIGHEST ANNUAL MEAN					208	1949
LOWEST ANNUAL MEAN					70.6	1988
HIGHEST DAILY MEAN	3,940	Sep 8	1,260	Jun 13	3,940	Sep 8, 2004
LOWEST DAILY MEAN	51	Jul 24	69	Sep 30	14	Sep 28, 1954
ANNUAL SEVEN-DAY MINIMUM	59	Jul 18	73	Sep 24	15	Sep 25, 1954
MAXIMUM PEAK FLOW			2,020	Jun 12	e8.400	Aug 15, 1928
MAXIMUM PEAK STAGE			5.01	Jun 12	12.08	Aug 17, 1994
INSTANTANEOUS LOW FLOW			66	Sep 30	13	Oct 11, 1954
ANNUAL RUNOFF (CFSM)	4.35		4.20	1	3.20	<i>.</i>
ANNUAL RUNOFF (INCHÉS)	59.19		57.00		43.43	
10 PERCENT EXCEEDS	282		252		229	
50 PERCENT EXCEEDS	115		139		101	
90 PERCENT EXCEEDS	74		98		42	

<sup>@</sup> See PERIOD OF RECORD. e Estimated.



## 03443000 FRENCH BROAD RIVER AT BLANTYRE, NC

LOCATION.--Lat 35°17'57", long 82°37'26", Transylvania County, Hydrologic Unit 06010105, on left bank 40 ft upstream from bridge on Secondary Road 1503, 700 ft east of railroad at Blantyre, 3.5 mi downstream of Little River, and at mile 183.7.

DRAINAGE AREA .-- 296 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS .-- WSP 923: 1921-23, 1929, 1933, 1935-36(M), 1938, 1940.

GAGE.--Water-stage recorder. Datum of gage is 2,060.32 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum. Satellite and telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Considerable diurnal fluctuation at low flow caused by power plant about 8 mi upstream from station. Maximum gage height for period of record, 25.81 ft, from floodmarks.

EXTREMES OUTSIDE PERIOD OF RECORD .-- Since at least 1791, maximum stage 27.1 ft, July 16, 1916, from floodmarks (from studies by Tennessee Valley Authority).

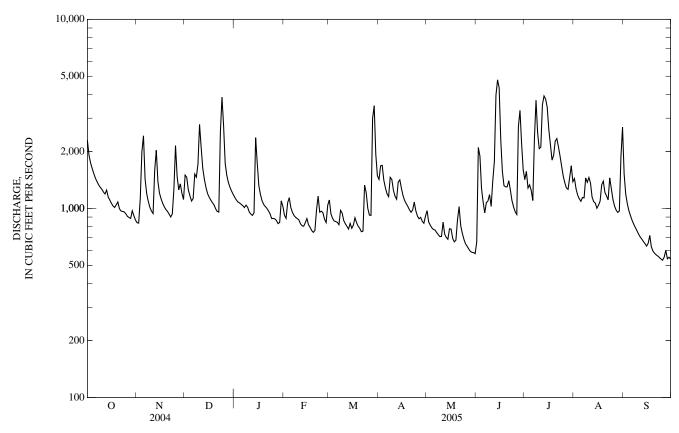
# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,290	840	1,500	1,140	920	1,110	1,420	974	663	1,420	1,440	1,520
2	1,910	836	1,460	1,110	886	936	1,680	848	2,100	1,570	1,270	1,190
3	1,740	1,130	1,250	1,080	1,070	886	1,690	816	1,890	1,280	1,170	1,060
4	1,620	1,990	1,170	1,070	1,140	858	1,410	789	1,270	1,330	1,120	970
5	1,530	2,420	1,090	1,050	1,010	852	1,280	774	1,080	1,250	1,090	913
6	1,440	1,430	1,130	1,030	952	843	1,200	767	948	1,100	1,140	864
7	1,390	1,200	1,520	1,010	916	820	1,150	745	1,070	2,330	1,140	824
8	1,330	1,090	1,460	1,040	897	977	1,460	726	1,090	3,730	1,450	792
9	1,290	1,010	1,710	1,010	883	944	1,420	709	1,180	2,520	1,370	761
10	1,260	968	2,780	958	869	862	1,250	711	1,030	2,070	1,460	731
11	1,220	939	2,100	934	829	829	1,160	845	1,390	2,110	1,360	707
12	1,190	1,590	1,630	918	809	803	1,120	730	1,770	3,540	1,150	688
13	1,250	2,030	1,430	948	805	777	1,380	702	3,970	3,930	1,090	669
14	1,150	1,390	1,290	2,370	840	833	1,420	687	4,790	3,790	1,070	651
15	1,110	1,200	1,200	1,740	883	785	1,280	780	4,340	3,420	1,000	632
16	1,060	1,120	1,150	1,320	820	816	1,170	777	2,300	e2,610	1,040	654
17	1,030	1,060	1,110	1,190	794	892	1,100	693	1,570	e2,170	1,090	719
18	1,010	1,020	1,070	1,100	764	840	1,060	666	e1,320	e1,800	1,330	626
19	1,040	987	1,040	1,050	747	805	1,020	679	e1,300	e1,910	1,390	594
20	1,080	963	997	1,020	764	784	984	872	e1,300	e2,270	1,210	579
21	995	933	964	1,000	982	753	954	1,020	e1,400	e2,340	1,160	568
22	969	901	956	970	1,160	758	981	811	1,250	e2,120	1,110	560
23	963	936	2,530	936	955	1,330	1,080	738	1,100	e1,890	1,450	550
24	958	1,270	3,880	884	966	1,210	970	687	1,020	e1,670	1,270	540
25	936	2,150	2,740	885	948	1,000	911	650	960	e1,480	1,120	532
26 27 28 29 30 31	908 894 885 971 915 868	1,480 1,250 1,350 1,200 1,110	1,730 1,500 1,370 1,290 1,230 1,190	880 862 831 843 1,100 1,030	877 841 1,040  	921 919 2,990 3,490 1,930 1,490	882 896 855 834 909	631 610 593 586 584 576	929 e2,700 e3,300 e2,200 1,600	1,360 1,280 1,260 1,460 1,680 1,380	1,030 980 952 968 1,870 2,690	552 600 541 552 540
TOTAL	37,202	37,793	47,467	33,309	25,367	34,043	34,926	22,776	52,830	64,070	38,980	21,679
MEAN	1,200	1,260	1,531	1,074	906	1,098	1,164	735	1,761	2,067	1,257	723
MAX	2,290	2,420	3,880	2,370	1,160	3,490	1,690	1,020	4,790	3,930	2,690	1,520
MIN	868	836	956	831	747	753	834	576	663	1,100	952	532
CFSM	4.05	4.26	5.17	3.63	3.06	3.71	3.93	2.48	5.95	6.98	4.25	2.44
IN.	4.68	4.75	5.97	4.19	3.19	4.28	4.39	2.86	6.64	8.05	4.90	2.72
STATIS	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1921 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	757	845	1,029	1,191	1,265	1,376	1,290	1,055	879	741	772	722
MAX	3,504	2,486	2,142	2,783	2,735	3,169	2,509	2,339	1,872	2,214	2,363	3,779
(WY)	(1965)	(1980)	(1962)	(1937)	(1998)	(1979)	(1936)	(1973)	(1989)	(1949)	(1994)	(2004)
MIN	157	235	301	260	561	550	473	434	278	290	191	169
(WY)	(1955)	(1955)	(1956)	(1956)	(1941)	(1988)	(1986)	(1988)	(1988)	(1925)	(1925)	(1954)

# 03443000 FRENCH BROAD RIVER AT BLANTYRE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WA7	FER YEAR	WATER YEARS	1921 - 2005
ANNUAL TOTAL	435,310		450,442			
ANNUAL MEAN	1,189		1,234		992	
HIGHEST ANNUAL MEAN					1,564	1949
LOWEST ANNUAL MEAN					534	1988
HIGHEST DAILY MEAN	13,000	Sep 9	4,790	Jun 14	22,700	Oct 5, 1964
LOWEST DAILY MEAN	457	Jun 12	532	Sep 25	123	Oct 10, 1954
ANNUAL SEVEN-DAY MINIMUM	482	Jun 6	551	Sep 24	133	Oct 8, 1954
MAXIMUM PEAK FLOW			4,810	Jun 14	30,000	Oct 5, 1964
MAXIMUM PEAK STAGE			17.53	Jun 14	25.81*	Sep 9, 2004
INSTANTANEOUS LOW FLOW			518	Sep 30	119	Oct 1, 1954
ANNUAL RUNOFF (CFSM)	4.02		4.17	1	3.35	
ANNUAL RUNOFF (INCHÉS)	54.71		56.61		45.54	
10 PERCENT EXCEEDS	1,760		1,950		1,710	
50 PERCENT EXCEEDS	863		1,060		806	
90 PERCENT EXCEEDS	562		723		356	

\* See REMARKS. e Estimated.



### 03446000 MILLS RIVER NEAR MILLS RIVER, NC

LOCATION.--Lat 35°23'53", long 82°35'42", Henderson County, Hydrologic Unit 06010105, on right bank 1.5 mi downstream of confluence of North and South Forks, 1.8 mi northwest of Mills River, 4.2 mi northwest of Horseshoe, and at mile 4.6.

DRAINAGE AREA.--66.7 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1924 to September 1926, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1935, 1937, 1939. WSP 1003: 1938, 1940-42. WSP 1143: 1940(P). WSP 1276: 1926.

GAGE.--Water-stage recorder. Datum of gage is 2,088.47 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Prior to Oct. 1, 1926, nonrecording gage at site 500 ft upstream at 2,091.44 ft. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. City of Hendersonville diverted about 6.1 ft<sup>3</sup>/s from North Fork and Bradley Creek for municipal water supply. Maximum discharge for period of record, from rating curve extended above 6,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record result of freezeup. Minimum discharge for current water year also occurred June 1, Sept. 30.

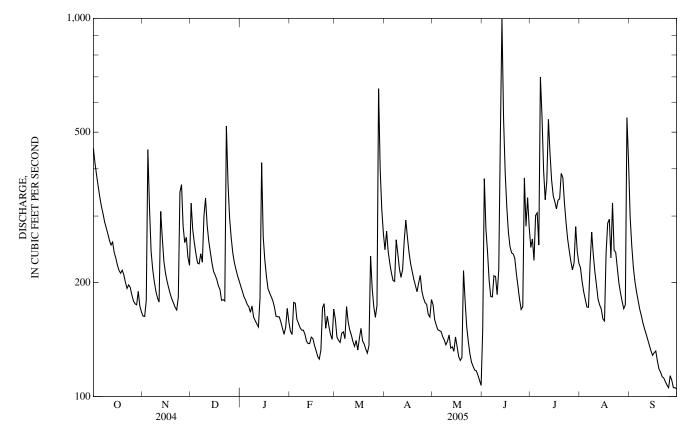
### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	453	163	325	195	149	160	244	175	151	248	219	299
2	414	163	276	190	146	144	274	160	377	261	202	251
3	385	180	255	183	177	141	242	154	277	229	189	220
4	359	449	238	180	177	139	225	150	241	301	181	201
5	336	317	225	175	160	147	212	149	203	306	173	189
6	318	242	224	173	156	148	203	148	184	251	172	179
7	305	217	238	167	152	142	201	144	183	699	224	170
8	289	201	227	174	150	173	260	141	209	549	272	164
9	279	190	300	162	150	158	239	137	207	395	237	156
10	269	182	335	159	146	150	218	140	186	331	213	151
11	259	178	284	156	140	145	206	145	217	372	197	146
12	252	309	258	153	138	140	217	134	486	541	181	141
13	256	263	241	182	138	136	259	135	996	438	175	137
14	240	228	225	416	144	141	293	132	544	373	170	132
15	232	212	214	264	142	133	263	144	393	339	160	128
16	222	201	209	229	136	142	240	136	318	327	158	130
17	215	193	204	208	132	151	224	127	272	313	240	132
18	212	186	196	193	128	140	214	125	249	331	287	124
19	216	181	192	188	126	138	204	127	240	333	294	118
20	210	177	180	184	133	133	196	215	238	389	233	116
21	200	172	180	179	172	130	189	179	232	379	325	113
22	193	169	179	172	176	136	200	153	211	325	244	112
23	197	183	519	163	151	235	209	140	195	288	240	109
24	194	346	368	162	163	193	190	130	180	261	219	107
25	185	364	297	162	153	173	182	123	170	243	199	105
26 27 28 29 30 31	179 176 175 190 173 167	282 255 263 233 222	263 240 226 217 208 202	157 151 146 152 171 157	146 142 170 	162 174 652 398 312 270	177 175 165 162 180	120 117 117 114 110 107	173 378 282 335 280	228 216 226 281 241 225	188 178 171 175 546 419	113 110 105 105 105
TOTAL	7,750	6,921	7,745	5,703	4,193	5,736	6,463	4,328	8,607	10,239	7,081	4,368
MEAN	250	231	250	184	150	185	215	140	287	330	228	146
MAX	453	449	519	416	177	652	293	215	996	699	546	299
MIN	167	163	179	146	126	130	162	107	151	216	158	105
CFSM	3.75	3.46	3.75	2.76	2.25	2.77	3.23	2.09	4.30	4.95	3.42	2.18
IN.	4.32	3.86	4.32	3.18	2.34	3.20	3.60	2.41	4.80	5.71	3.95	2.44
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1925 - 2005	, <sup>@</sup> BY WAT	TER YEAR (	WY)			
MEAN	125	143	164	196	217	241	233	188	152	124	128	123
MAX	465	510	338	534	499	520	468	425	359	356	506	729
(WY)	(1965)	(1980)	(1962)	(1937)	(1998)	(1979)	(1957)	(2003)	(1992)	(1989)	(1940)	(2004)
MIN	24.8	35.2	40.7	43.5	88.9	87.5	79.7	76.2	41.7	38.6	25.4	22.8
(WY)	(1955)	(1955)	(1940)	(1956)	(1941)	(1988)	(1986)	(1988)	(1988)	(1988)	(1925)	(1925)

# 03446000 MILLS RIVER NEAR MILLS RIVER, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALEND	OAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS	1925 - 2005 <sup>@</sup>
ANNUAL TOTAL	79,314		79,134			
ANNUAL MEAN	217		217		169	
HIGHEST ANNUAL MEAN					272	1949
LOWEST ANNUAL MEAN					86.3	2002
HIGHEST DAILY MEAN	4,430	Sep 8	996	Jun 13	4,470	Aug 13, 1940
LOWEST DAILY MEAN		Aug 28	105	Sep 25	18	Sep 30, 1954
ANNUAL SEVEN-DAY MINIMUM		Aug 17	107	Sep 24	19	Sep 24, 1954
MAXIMUM PEAK FLOW		C	1,310	Jun 13	13,400*	Aug 30, 1940
MAXIMUM PEAK STAGE			4.34	Jun 13	13.62	Aug 30, 1940
INSTANTANEOUS LOW FLOW			103*	May 31	16*	Dec 24, 1943
ANNUAL RUNOFF (CFSM)	3.25		3.25	-	2.54	
ANNUAL RUNOFF (INCHÉS)	44.24		44.13		34.52	
10 PERCENT EXCEEDS	337		329		302	
50 PERCENT EXCEEDS	156		190		136	
90 PERCENT EXCEEDS	100		134		54	

<sup>\*</sup> See REMARKS.
 <sup>®</sup> See PERIOD OF RECORD.



## 03447687 FRENCH BROAD RIVER NEAR FLETCHER, NC

LOCATION.--Lat 35°25'39", long 82°32'53", Henderson County, Hydrologic Unit 06010105, on right bank 30 ft downstream of bridge on Secondary Road 1419, 0.4 mi downstream from McDowell Creek, 2.9 mi west of Fletcher, and at river mile 165.3.

DRAINAGE AREA .-- 640 mi<sup>2</sup>.

PERIOD OF RECORD.--July 2001 to current year.

REVISED RECORDS .-- WDR NC-04-1: 2001-2003(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,055 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

REMARKS .-- No estimated daily discharges. Records good. Minimum discharge for current water year also occurred on Sept. 30.

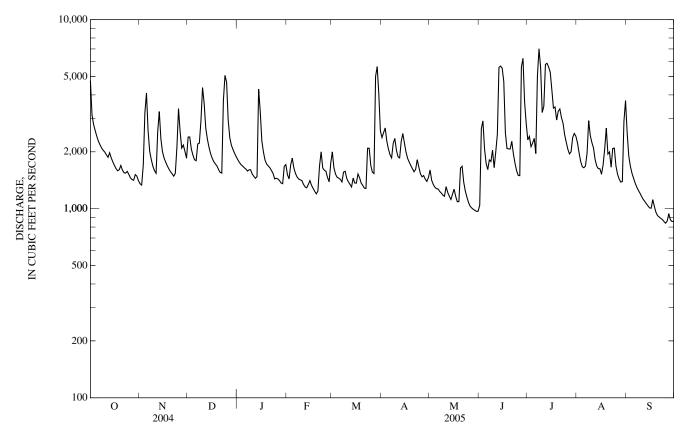
### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

					2.11							
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,760	1,360	2,390	1,820	1,510	2,000	2,380	1,600	1,040	2,310	2,230	2,540
2	3,140	1,330	2,400	1,760	1,440	1,640	2,530	1,410	2,650	2,420	1,980	1,910
3	2,790	1,700	2,070	1,710	1,710	1,520	2,670	1,340	2,910	2,130	1,780	1,680
4	2,590	3,220	1,920	1,680	1,850	1,470	2,280	1,300	2,070	2,220	1,670	1,540
5	2,410	4,090	1,820	1,650	1,640	1,450	2,070	1,280	1,740	2,360	1,650	1,450
6	2,270	2,580	1,790	1,620	1,540	1,430	1,930	1,270	1,610	1,960	1,680	1,370
7	2,180	2,010	2,200	1,580	1,470	1,390	1,860	1,240	1,810	5,020	1,970	1,300
8	2,100	1,820	2,220	1,610	1,440	1,560	2,220	1,210	1,780	7,010	2,920	1,250
9	2,040	1,680	2,920	1,610	1,420	1,580	2,360	1,180	2,040	5,570	2,440	1,210
10	1,990	1,590	4,380	1,530	1,410	1,450	2,040	1,160	1,650	3,230	2,240	1,160
11	1,930	1,540	3,610	1,480	1,350	1,390	1,880	1,310	2,000	3,480	2,100	1,120
12	1,870	2,550	2,670	1,450	1,310	1,350	1,860	1,220	2,480	5,800	1,820	1,090
13	1,980	3,270	2,340	1,480	1,290	1,300	2,270	1,170	5,590	5,880	1,680	1,060
14	1,860	2,340	2,120	4,290	1,340	1,450	2,500	1,120	5,680	5,610	1,630	1,040
15	1,770	2,000	1,960	3,280	1,410	1,370	2,230	1,190	5,540	5,280	1,630	1,010
16	1,700	1,850	1,850	2,280	1,330	1,370	1,990	1,270	4,720	4,260	1,520	1,010
17	1,630	1,760	1,770	1,990	1,280	1,530	1,850	1,160	2,530	3,410	1,710	1,120
18	1,590	1,690	1,730	1,810	1,240	1,460	1,760	1,090	2,080	3,450	2,080	1,030
19	1,610	1,620	1,680	1,720	1,200	1,370	1,690	1,090	2,070	2,940	2,670	957
20	1,690	1,570	1,610	1,680	1,240	1,330	1,630	1,640	2,070	3,280	1,950	919
21	1,600	1,530	1,560	1,650	1,680	1,280	1,570	1,680	2,270	3,370	2,000	904
22	1,550	1,490	1,540	1,590	2,000	1,280	1,620	1,380	1,950	3,040	1,660	889
23	1,540	1,540	3,730	1,540	1,640	2,090	1,820	1,240	1,740	2,830	2,080	877
24	1,580	2,120	5,080	1,440	1,600	2,090	1,660	1,150	1,590	2,460	2,090	856
25	1,520	3,380	4,670	1,450	1,580	1,690	1,530	1,080	1,500	2,250	1,690	838
26 27 28 29 30 31	1,460 1,430 1,420 1,520 1,490 1,410	2,550 2,090 2,170 2,010 1,850	2,940 2,380 2,170 2,060 1,960 1,890	1,440 1,410 1,370 1,360 1,680 1,710	1,460 1,390 1,740  	1,560 1,540 5,010 5,650 4,050 2,570	1,470 1,500 1,430 1,390 1,460	1,030 1,010 992 980 968 970	1,500 5,600 6,240 3,670 2,830	2,060 1,950 2,000 2,380 2,500 2,420	1,520 1,440 1,380 1,390 2,890 3,730	861 942 874 856 858
TOTAL	60,420	62,300	75,430	54,670	41,510	58,220	57,450	37,730	82,950	104,880	61,220	34,521
MEAN	1,949	2,077	2,433	1,764	1,482	1,878	1,915	1,217	2,765	3,383	1,975	1,151
MAX	4,760	4,090	5,080	4,290	2,000	5,650	2,670	1,680	6,240	7,010	3,730	2,540
MIN	1,410	1,330	1,540	1,360	1,200	1,280	1,390	968	1,040	1,950	1,380	838
CFSM	3.05	3.24	3.80	2.76	2.32	2.93	2.99	1.90	4.32	5.29	3.09	1.80
IN.	3.51	3.62	4.38	3.18	2.41	3.38	3.34	2.19	4.82	6.10	3.56	2.01
STATIST	ICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	2001 - 2005	, BY WATE	R YEAR (W	/Y)			
MEAN	1,158	1,633	1,978	1,398	1,760	1,798	1,826	1,841	1,821	1,738	1,252	2,453
MAX	1,949	2,311	2,433	1,764	2,499	2,480	2,706	3,663	2,765	3,383	2,076	7,541
(WY)	(2005)	(2004)	(2005)	(2005)	(2004)	(2003)	(2003)	(2003)	(2005)	(2005)	(2003)	(2004)
MIN	587	522	806	1,149	1,130	1,230	1,319	1,217	801	513	346	787
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2004)	(2004)	(2005)	(2002)	(2002)	(2002)	(2001)

# 03447687 FRENCH BROAD RIVER NEAR FLETCHER, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WA7	FER YEAR	WATER YEARS 2001 - 2005		
ANNUAL TOTAL	776,419		731,301				
ANNUAL MEAN	2,121		2,004		1,785		
HIGHEST ANNUAL MEAN					2,145	2003	
LOWEST ANNUAL MEAN					923	2002	
HIGHEST DAILY MEAN	23,800	Sep 9	7,010	Jul 8	23,800	Sep 9, 2004	
LOWEST DAILY MEAN	769	Aug 23	838	Sep 25	201	Sep 13, 2002	
ANNUAL SEVEN-DAY MINIMUM	805	Aug 17	869	Sep 24	221	Sep 7, 2002	
MAXIMUM PEAK FLOW		•	7,390	Jul 7	25,500	Sep 8, 2004	
MAXIMUM PEAK STAGE			10.84	Jul 7	20.13	Sep 8, 2004	
INSTANTANEOUS LOW FLOW			829*	Sep 26	193	Sep 12, 2002	
ANNUAL RUNOFF (CFSM)	3.31		3.13	1	2.79	1	
ANNUAL RUNOFF (INCHÉS)	45.13		42.51		37.90		
10 PERCENT EXCEEDS	3,110		3,220		2,940		
50 PERCENT EXCEEDS	1,480		1,680		1,440		
90 PERCENT EXCEEDS	981		1,180		595		

\* See REMARKS.



## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC

LOCATION.--Lat 35°28'54", long 82°38'05", Buncombe County, Hydrologic Unit 06010105, on right bank 70 ft below trail footbridge, 300 ft downstream from culvert under Bent Creek Gap Road, 0.4 mi west of Lake Powhatan, and at Bent Creek Research Station well cluster number 2.

DRAINAGE AREA .-- 1.03 mi2.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD .-- March 2004 to November 2005 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 2,177.77 ft above NGVD of 1929 (levels by North Carolina Department of Environment and Natural Resources). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for 2005 water year also occurred Sept. 24, 25. Minimum discharge for 2006 water year also occurred Oct. 18.

#### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2 3 4 5	   	   	   	  	  	e1.5 e1.6 e1.5 e1.5	1.8 1.4 1.3 1.2 1.2	1.7 1.8 1.6 1.5 1.5	$     \begin{array}{r}       1.3 \\       0.95 \\       0.90 \\       1.5 \\       0.82     \end{array} $	$0.58 \\ 0.62 \\ 0.71 \\ 0.68 \\ 0.65$	e1.0 e1.1 e1.1 0.87 0.92	1.7 3.9 2.0 1.5 1.3
6 7 8 9 10	  	   	   	  	  	e1.6 e1.5 e1.5 e1.5 e1.4	$ \begin{array}{c} 1.1 \\ 1.1 \\ 1.1 \\ 0.98 \\ 0.92 \end{array} $	1.4 1.3 1.3 1.7 1.3	0.72 0.68 0.71 0.61 0.54	0.80 0.75 0.71 0.76 0.79	0.83 0.78 0.79 0.74 0.70	1.7 17 24 7.4 5.3
11 12 13 14 15	  	   	   	  	  	e1.4 e1.3 e1.3 e1.4 e1.5	1.2 2.5 7.5 4.2 2.5	1.1 0.97 1.3 1.2 0.95	0.45 0.55 0.81 0.72 2.0	0.84 0.88 0.93 0.81 0.68	2.0 2.2 1.4 1.1 1.0	5.2 4.5 4.6 4.1 4.0
16 17 18 19 20	  	   	   	  	  	e1.6 e1.4 1.6 1.4 1.4	2.0 1.8 1.6 1.5 1.3	0.82 0.82 0.77 0.86 0.93	1.5 1.5 1.5 0.99 0.76	0.63 0.81 0.85 0.71 0.68	0.89 0.85 0.81 0.79 0.77	9.2 e56 4.7 3.3 2.5
21 22 23 24 25	  	  	   	  	  	e1.4 e1.2 1.1 1.1 0.99	1.2 1.1 1.2 1.3 1.2	$0.71 \\ 0.87 \\ 1.1 \\ 0.88 \\ 0.67$	0.81 0.85 0.72 0.67 0.89	$0.63 \\ 0.62 \\ 0.59 \\ 0.64 \\ 0.63$	1.00 0.99 0.91 0.83 0.80	2.2 2.1 2.2 2.1 2.1 2.1
26 27 28 29 30	  	  	  	  	  	0.96 0.91 0.87 0.80 0.88	2.8 2.2 1.9 1.8 1.7	$\begin{array}{c} 0.69 \\ 0.79 \\ 0.69 \\ 0.62 \\ 0.91 \\ 2.0 \end{array}$	$0.90 \\ 0.75 \\ 0.69 \\ 0.61 \\ 0.60$	0.62 2.5 1.6 e1.0 e1.2	0.78 0.74 0.74 1.5 2.3	2.1 3.7 7.9 4.5 3.9
31 TOTAL MEAN MAX MIN CFSM IN.	   	   	   	   		2.1 41.81 1.35 2.1 0.80 1.31 1.51	 54.60 1.82 7.5 0.92 1.77 1.97	$2.0 \\ 34.75 \\ 1.12 \\ 2.0 \\ 0.62 \\ 1.09 \\ 1.26$	 27.00 0.90 2.0 0.45 0.87 0.98	e1.0 25.90 0.84 2.5 0.58 0.81 0.94	1.9 33.13 1.07 2.3 0.70 1.04 1.20	 196.7 6.56 56 1.3 6.37 7.10
		ONTHLY M								0.74	1.20	7.10
MEAN MAX (WY) MIN (WY)	  	   	   	  	  	1.35 1.35 (2004) 1.35 (2004)	1.82 1.82 (2004) 1.82 (2004)	1.12 1.12 (2004) 1.12 (2004)	$\begin{array}{c} 0.90 \\ 0.90 \\ (2004) \\ 0.90 \\ (2004) \end{array}$	$\begin{array}{c} 0.84 \\ 0.84 \\ (2004) \\ 0.84 \\ (2004) \end{array}$	$1.07 \\ 1.07 \\ (2004) \\ 1.07 \\ (2004)$	6.56 6.56 (2004) 6.56 (2004)

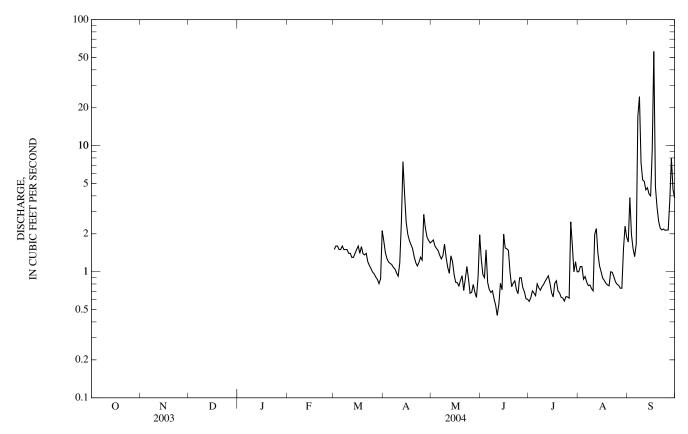
SUMMARY STATISTICS

INSTANTANEOUS PEAK FLOW INSTANTANEOUS PEAK STAGE INSTANTANEOUS LOW FLOW FOR 2004 WATER YEAR

NOT DETERMINED 4.91 Sep 17 0.34 Jun 12

e Estimated.

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued



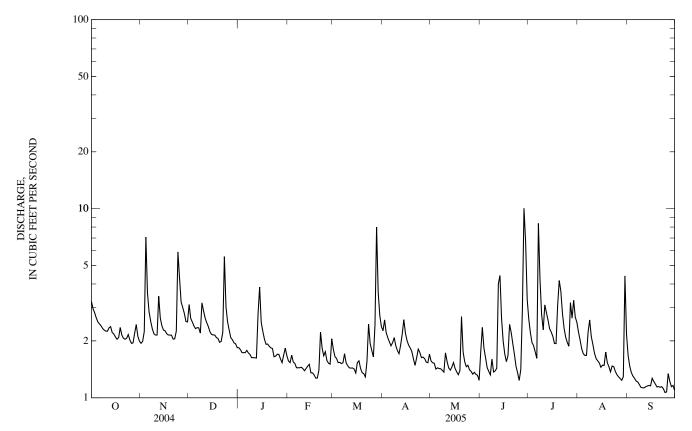
# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

## DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1 2 3 4 5	3.2 3.0 2.8 2.7 2.5	1.9 2.0 2.2 7.1 3.6	3.1 2.6 2.5 2.4 2.3	1.8 1.8 1.7 1.7 1.7	1.6 1.5 1.7 1.5 1.5	1.8 1.7 1.6 1.5 1.5	2.3 2.6 2.2 2.1 2.0	1.6 1.5 1.5 1.4 1.4	1.8 2.4 1.8 1.6 1.4	2.6 2.2 2.0 1.9 1.7	2.2 2.0 1.8 1.7 1.7	1.7 1.5 1.4 1.3 1.3	
6 7 8 9 10	2.5 2.4 2.3 2.3 2.3	2.8 2.5 2.3 2.2 2.1	2.3 2.3 2.2 3.2 2.9	1.8 1.7 1.7 1.6 1.6	1.4 1.4 1.5 1.4	1.5 1.5 1.7 1.5 1.5	1.9 2.0 2.1 1.9 1.8	1.4 1.4 1.4 1.4 1.7	1.4 1.3 1.6 1.4 1.4	1.6 8.4 4.2 2.8 2.3	1.7 2.2 2.6 2.1 1.9	1.2 1.2 1.2 1.1 1.1	
11 12 13 14 15	2.2 2.3 2.4 2.2 2.2	2.1 3.4 2.6 2.4 2.3	2.6 2.5 2.4 2.2 2.2	1.6 1.6 2.8 3.9 2.5	1.4 1.4 1.5 1.5 1.4	$1.4 \\ 1.4 \\ 1.4 \\ 1.4 \\ 1.4 \\ 1.4$	1.7 1.9 2.2 2.6 2.2	1.6 1.4 1.4 1.5 1.5	$1.4 \\ 4.0 \\ 4.4 \\ 2.6 \\ 2.0$	3.1 2.8 2.6 2.3 2.2	1.7 1.6 1.6 1.5 1.4	1.1 1.1 1.2 1.2 1.2	
16 17 18 19 20	2.1 2.0 2.1 2.4 2.1	2.3 2.2 2.1 2.1 2.1	2.2 2.1 2.1 2.1 2.0	2.2 2.0 1.9 1.9 1.9	1.4 1.3 1.3 1.3 1.4	1.5 1.6 1.4 1.4 1.3	2.0 1.9 1.8 1.8 1.6	1.4 1.4 1.3 1.4 2.7	1.7 1.6 1.7 2.4 2.2	2.1 1.9 1.9 3.1 4.2	1.5 1.5 1.7 1.5 1.5	1.3 1.2 1.2 1.1 1.1	
21 22 23 24 25	2.1 2.0 2.1 2.2 2.0	2.0 2.1 2.3 5.9 4.3	2.0 2.2 5.6 3.0 2.5	1.8 1.8 1.6 1.7 1.7	2.2 1.8 1.7 1.8 1.6	1.3 1.6 2.5 1.9 1.8	1.5 1.6 1.8 1.7 1.6	1.7 1.6 1.5 1.5 1.4	1.9 1.7 1.5 1.4 1.2	3.7 2.8 2.3 2.1 2.0	1.4 1.5 1.5 1.4 1.3	$1.1 \\ 1.1 \\ 1.1 \\ 1.1 \\ 1.1 \\ 1.1$	
26 27 28 29 30 31	1.9 2.0 2.2 2.4 2.1 2.0	3.2 3.0 2.8 2.5 2.5	2.3 2.1 2.0 2.0 1.9 1.8	1.7 1.6 1.5 1.7 1.8 1.7	1.5 1.5 2.1 	1.6 2.4 8.0 3.6 2.7 2.4	1.6 1.6 1.5 1.5 1.7	1.4 1.3 1.4 1.3 1.3 1.2	1.4 2.9 10 6.7 3.3	1.9 3.2 2.6 3.3 2.7 2.5	1.3 1.3 1.2 1.3 4.4 2.2	1.3 1.2 1.1 1.2 1.1	
TOTAL MEAN MAX MIN CFSM IN.	71.0 2.29 3.2 1.9 2.22 2.56	82.9 2.76 7.1 1.9 2.68 2.99	75.6 2.44 5.6 1.8 2.37 2.73	58.0 1.87 3.9 1.5 1.82 2.09	43.0 1.54 2.2 1.3 1.49 1.55	59.8 1.93 8.0 1.3 1.87 2.16	56.7 1.89 2.6 1.5 1.83 2.05	45.9 1.48 2.7 1.2 1.44 1.66	72.1 2.40 10 1.2 2.33 2.60	85.0 2.74 8.4 1.6 2.66 3.07	54.2 1.75 4.4 1.2 1.70 1.96	36.1 1.20 1.7 1.1 1.17 1.30	
STATIST	TICS OF MO	ONTHLY M	EAN DAT	A FOR WAT	ER YEARS	2004 - 2005	, BY WATE	ER YEAR (W	/Y)				
MEAN MAX (WY) MIN (WY)	2.29 2.29 (2005) 2.29 (2005)	2.76 2.76 (2005) 2.76 (2005)	2.44 2.44 (2005) 2.44 (2005)	1.87 1.87 (2005) 1.87 (2005)	1.54 1.54 (2005) 1.54 (2005)	1.64 1.93 (2005) 1.35 (2004)	1.85 1.89 (2005) 1.82 (2004)	1.30 1.48 (2005) 1.12 (2004)	1.65 2.40 (2005) 0.90 (2004)	1.79 2.74 (2005) 0.84 (2004)	1.41 1.75 (2005) 1.07 (2004)	3.88 6.56 (2004) 1.20 (2005)	
SUMMA	RY STATIS	STICS		FOR 2004 C	CALENDAR	YEAR	FOR 200	5 WATER	YEAR	WATER	YEARS 200	04 - 2005	
LOWEST HIGHEST LOWEST ANNUAI MAXIMU INSTANT ANNUAI ANNUAI 10 PERCI 50 PERCI	L MEAN T ANNUAL T ANNUAL T DAILY M T DAILY M L SEVEN-D JM PEAK I JM PEAK S	MEAN IEAN EAN AY MINIM FLOW STAGE LOW FLOW (CFSM) (INCHES) EDS EDS			6 Sep 0.45 Jun 0.61 Jun	11		1.1         Sep           1.1         Sep           63         Jun           3.19         Jun	n 28 p 9 p 19 n 28 n 28 p 23	2.03 2.03 2005 2.03 2005 56 Sep 17, 2004 0.45 Jun 11, 2004 0.61 Jun 6, 2004 NOT DETERMINED 4.91 Sep 17, 2004 0.34 Jun 12, 2004 1.97 26.75 2.8 1.8 1.3			

\* See REMARKS.

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued



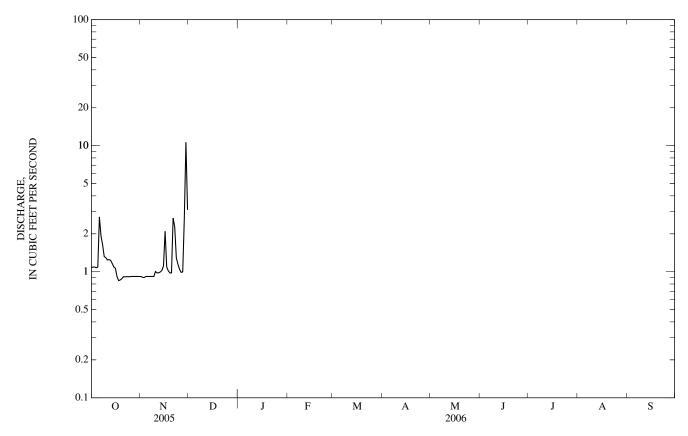
# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

## DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006 DAILY MEAN VALUES

					DAI	LIMEAN	VALUES					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	0.92										
2	1.1	0.90										
3	1.1	0.90										
4 5	1.1 1.1	$0.92 \\ 0.92$										
5	1.1	0.92										
6	2.7	0.92										
7	1.9	0.92										
8	1.6	0.92										
10	1.3 1.3	0.92 1.0										
11	1.2	0.98										
12 13	1.2 1.2	$0.98 \\ 1.00$										
13	1.2	1.00										
15	1.1	1.1										
16	1.1	2.1										
16 17	1.1 0.91	2.1 1.1										
18	0.91	1.1										
19	0.86	0.98										
20	0.88	0.98										
21	0.91	2.7										
$\frac{21}{22}$	0.91	2.7										
23	0.92	1.3										
24	0.91	1.1										
25	0.91	1.0										
26	0.92	0.99										
27	0.92	1.00										
28	0.92	2.7										
29	0.92	11										
30 31	$0.92 \\ 0.92$	3.1										
51	0.72											
TOTAL	34.88	47.65										
MEAN	1.13	1.59										
MAX MIN	2.7 0.85	11 0.90										
CFSM	1.09	1.54										
IN.	1.26	1.72										
OT A TIOT					ED VEADO	2004 200						
51A1151	ICS OF MO	JNIHLYM	EAN DAI	A FOR WAT	EK TEAKS	2004 - 2000	5, BY WAIE	ER TEAR (V	(Y)			
MEAN	1.71	2.18	2.44	1.87	1.54	1.64	1.85	1.30	1.65	1.79	1.41	3.88
MAX	2.29	2.76	2.44	1.87	1.54	1.93	1.89	1.48	2.40	2.74	1.75	6.56
(WY)	(2005)	(2005) 1.59	(2005) 2.44	(2005)	(2005)	(2005)	(2005) 1.82	(2005) 1.12	(2005)	(2005)	(2005) 1.07	(2004) 1.20
MIN (WY)	1.13 (2006)	(2006)	(2005)	1.87 (2005)	1.54 (2005)	1.35 (2004)	(2004)	(2004)	0.90 (2004)	0.84 (2004)	(2004)	(2005)
(1)	(2000)	(2000)	(2005)	(2005)	(2005)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2005)
SUMMA	RY STATIS	STICS		FOR 2005 C	CALENDAR	R YEAR	FOR 200	06 WATER	YEAR	WATER	R YEARS 20	04 - 2006
LOWEST HIGHES' LOWEST ANNUAI MAXIMU INSTAN' ANNUAI ANNUAI 10 PERC 50 PERC	T ANNUAI T ANNUAL T DAILY M T DAILY M L SEVEN-E JM PEAK I JM PEAK S	MEAN IEAN EAN STAGE LOW FLOW (CFSM) (INCHES) EDS EDS				7 29 t 18 t 17		0.85 Oc 0.89 Oc 43 No 2.98 No	v 29 tt 18 tt 17 v 29 v 29 tt 17		0.45 Ju 0.61 Ju NOT DET 4.91 Se	2005 2005 ep 17, 2004 in 11, 2004 in 6, 2004 ERMINED ep 17, 2004 in 12, 2004

\* See REMARKS.

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued



## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD .-- August 2004 to November 2005 (discontinued).

PERIOD OF DAILY RECORD .--SPECIFIC CONDUCTANCE: August 2004 to November 2005. SPECIFIC CONDUCTANCE: August 2004 to November 2003. pH: August 2004 to November 2005. WATER TEMPERATURE: August 2004 to November 2005. DISSOLVED OXYGEN: August 2004 to November 2005. DISSOLVED OXYGEN, PERCENT SATURATION: August 2004 to November 2005.

INSTRUMENTATION .-- Water-quality monitor with satellite telemetry from August 2004 to November 2005.

REMARKS .-- Station operated in cooperation with North Carolina Department of Environment and Natural Resources, Division of Water Resources, as part of the Piedmont/Mountains ground-water project. Dissolved oxygen, percent saturation, computed using a barometric pressure of 710 mm Hg.

EXTREMES FOR PERIOD OF DAILY RECORD .--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	33, October 6, 7, November 29, 2005	9, December 20, 21, 2004, January 28, 29, 2005
pH, standard units	7.4, August 9, 2004	5.8, July 27, August 13, 2005
WATER TEMPERATURE, °C	20.4, July 27, 2005	0.4, January 24, 2005
DISSOLVED OXYGEN, mg/L	13.0, December 20, 2004, March 2, 2005	6.1, November 9, 10, 2005
DISSOLVED OXYGEN, PERCENT SATURATION,%	105, April 16, 17, June 28, 2005	62, November 10, 2005

### WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Carbon dioxide water, unfltrd mg/L (00405)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)
AUG 18	0815	1.0	8.2	94	7.3	18	18.1	6	1.21	.691	.78	.3	1.49

Date	Sodium, percent (00932)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Bromide water, fltrd, mg/L (71870)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
AUG 18	32	8	.04	.88	<.1	11.2	1.0	22	.03	25	<.04	E.04	<.008

Date	Total nitro- gen, wat flt by anal ysis, mg/L (62854)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
AUG 18	.20	<.006	<2	<7.0	77	10.8

Remark codes used in this table: < -- Less than. E -- Estimated.

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	(	OCTOBE	R	Ν	OVEMBE	ER	D	ECEMBE	R	j	ANUAR	Y
		JUNE			JULY			AUGUST		SI	EPTEMBI	ER
1												
$\frac{2}{3}$												
4							18	 17	 17			
5							18	17	17			
5							17	17	17			
6							17	16	17			
7							17	15	16			
8							16	15	15			
9							16	15	15			
10							16	15	16			
11							24	16	16			
11 12							24 17	16	16 16			
								16				
13							17	14	15			
14							15	14	15			
15							16	15	15			
16												
17							15	10	15			
18							17	15	15			
19							16	15	15			
20							16	15	15			
21							17	16	16			
22							17	16	16			
23							18	17	17			
24							18	17	18			
25							19	18	18			
26							20	18	19			
27							20	18	19			
28							19	15	16			
29												
30												
31												
MONTH												

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBE	ÊR	D	ECEMBE	ER		JANUARY	7
1 2 3 4 5	  	  	   	15 16 16 21 16	14 15 15 15 14	15 15 16 18 15	12 12 11 11 11	11 11 11 10 10	12 11 11 11 11	12 12 12 12 12	11 11 11 12 12	11 11 12 12 12
6 7 8 9 10	15 14 14 15	14 13 14 14	14 14 14 14	14 14 14 14 14	13 13 13 13 13	14 14 14 13 13	12 12 13 12 12	11 11 11 11 12	11 12 12 11 12	13 12 13 12 12	12 12 12 12 12	12 12 12 12 12 12
11 12 13 14 15	15 16 17 15 14	14 14 14 14	14 15 15 14 14	14 14 14 14 13	12 12 13 12 12	13 14 13 13 12	12 11 11 12 11	11 11 11 10 10	12 11 11 11 10	13 13 14 14 12	12 12 12 12 11	12 12 13 13 12
16 17 18 19 20	14 14 14 16 15	13 13 13 14 15	14 14 14 15 15	13 13 13 13 13 14	12 12 12 13 13	12 13 13 13 13	11 11 11 11 11	10 10 10 10 9	10 10 10 11 10	12 11 11 11 11	11 10 10 10 10	11 11 10 10 11
21 22 23 24 25	15 15 16 15 15	15 15 15 15 14	15 15 15 15 15	14 14 14 18 14	13 13 13 13 13 12	13 13 13 14 13	10 11 13 11 11	9 10 11 10 10	10 10 12 11 10	12 11 11 11 11	11 11 10 10 10	11 11 10 10 11
26 27 28 29 30 31	15 16 17 17 16 15	14 15 15 15 15 15	15 15 16 16 15 15	12 12 12 12 12	12 11 11 11 11 11	12 12 12 12 12	11 11 10 11 11 11	10 10 10 10 10 11	10 10 10 10 11 11	$     \begin{array}{r}       11 \\       10 \\       10 \\       10 \\       11 \\       11 \\       11     \end{array} $	10 10 9 9 10 10	11 10 10 9 10 10
MONTH				21	11	13	13	9	11	14	9	11
		FEBRUARY	ľ		MARCH			APRIL			MAY	
1 2 3 4 5	11 11 11 11 11	10 10 10 10 10	10 10 11 10 10	13 13 13 13 13 13	13 13 12 12 12	13 13 13 12 12	15 16 15 15 15	15 15 15 15 15	15 15 15 15 15	  	  	  
6 7 8 9 10	11 11 14 11 11	10 10 11 11 10	10 11 11 11 10	13 14 14 14 14	13 13 14 13 13	13 13 14 13 13	16 16 16 16 16	15 15 15 15 15	15 15 15 15 15	  	  	   
11 12 13 14 15	10 11 11 11 11	10 10 10 10 10	10 10 10 10 11	14 14 14 14 14	13 13 13 12 12	13 13 14 13 13	16 16 17 17 16	15 15 15 16 15	16 16 16 16 16	   	  	   
16 17 18 19 20	11 11 11 11 11	11 10 10 10 10	11 11 10 10 10	15 15 15 15 14	14 14 14 13 13	15 14 15 14 14	16 16 17 16	15 15 16 16	16 15 16 16 16	  	  	  
21 22 23 24 25	12 12 12 14 14	11 11 11 11 14	11 11 11 13 14	15 15 16 15 15	13 14 15 15 15	14 14 15 15 15	17 17 17 17 17	16 16 16 16	16 16 17 16 17	  17	  17	   17
26 27 28 29 30	14 14 14 	14 13 12	14 13 13 	16 17 17 15 15	15 15 15 15 15	15 15 16 15 15	17 17 17 18	16 17 17 17	17 17 17 17	17 18 20 22 23	17 17 17 18 18	17 17 18 18 18
31 MONTH	14	10	 11	15 17	15 12	15 14				19 	18 	18

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		S	EPTEMBE	ER
1 2 3 4 5	20 20 20 20 21	19 18 16 19 19	19 20 20 20 20 20	26 25 27 23 27	19 20 21 22 23	19 21 21 22 23	21 21 21 22 23	20 20 20 21 21	21 20 21 21 22	24 19 19 19 19	18 18 19 19 18	19 19 19 19 19
6 7 8 9 10	20 22 23 23 23	20 20 21 22 22	20 21 22 22 22	24 27 23 22 22	23 16 17 17 18	23 20 18 18 18	23 23 24 21 21	22 22 21 20 21	23 22 22 21 21	18 18 19 19 19	18 18 18 18 19	18 18 18 19 19
11 12 13 14 15	24  	23  	23	22 24 24 23 22	18 22 21 21 21	19 23 22 21 22	21 21 21 20 20	20 20 19 18 19	20 21 20 19 19	20 20 20 20 21	19 19 19 20 20	19 19 20 20 20
16 17 18 19 20	  	  	   	22 21 22 25 25	21 21 20 21 15	21 21 21 23 22	20 20 21 22 28	19 19 19 20 22	20 19 20 21 23	22 21 21 21 21 21	20 21 20 20 20	21 21 20 20 20
21 22 23 24 25	  	  	  	17 18 18 17 17	16 16 17 17 17	16 16 17 17 17	27 24 24 23 24	21 22 22 22 22 22	23 23 22 22 22	21 22 22 23 21	20 21 21 21 16	21 21 21 22 17
26 27 28 29 30 31	 17 19	 16 17	 16 18	17 24 19 22 21 21	17 17 16 18 20 19	17 18 18 20 21 20	25 22 23 23 28 24	21 21 20 21 21 19	22 22 21 21 25 21	19 18 18 19 19	17 17 17 18 18	18 18 17 18 19
MONTH				27	15	20	28	18	21	24	16	19

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	(	OCTOBE	ĸ	Ν	OVEMBE	ER	D	ECEMBE	R	J	JANUAR	Y
1 2 3 4 5	19 19 20 20 21	18 18 19 19 19	19 19 19 20 20	17 17 17 17 18	17 17 17 17 17	17 17 17 17 17	  	  	  	  	  	  
6 7 8 9 10	33 33 22 21 22	21 20 20 20 20	26 27 21 20 21	18 18 18 18 21	17 17 17 17 18	18 18 17 18 20	  	  	   	  	  	  
11 12 13 14 15	21 20 20 20 20	19 19 18 18 18	20 19 19 19 19	19 18 23 23 22	18 17 17 17 17	18 18 17 18 18	  	  	  	  	  	  
16 17 18 19 20	19  18 18 18	17  17 17 18	18 17 18 18	29 21 17 19 16	21 16 16 16 16	24 20 16 16 16	  	  	  	  	  	  
21 22 23 24 25	18 18 20 18 18	17 18 17 17 17	18 18 18 17 17	22 22 18 18 17	16 18 17 17 16	18 19 18 17 16	  	  	  	  	  	  
26 27 28 29 30 31	17 17 17 17 17 17	17 16 17 16 16 16	17 17 17 17 17 17	17 17 27 33 15	16 16 17 15 14	16 16 20 19 14	   	   	   	   	   	   
MONTH				33	14	18						

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		SI	EPTEMBI	ER
1												
2												
3												
4							7.2	6.8	7.0			
5							7.0	6.9	7.0			
6							7.2	6.6	6.9			
7							7.3	6.6	6.9			
8							7.3	6.6	7.0			
9							7.4	6.6	6.8			
10							7.3	6.6	6.8			
11												
12												
13												
14												
15												
16												
17							7.0	6.9	7.0			
18							7.1	6.5	6.8			
19							6.8	6.4	6.5			
20							6.8	6.5	6.7			
21							6.8	6.8	6.8			
22							6.9	6.8	6.8			
23							6.8	6.7	6.8			
24							6.9	6.7	6.8			
25							6.9	6.6	6.8			
26							6.8	6.5	6.8			
27							6.8	6.4	6.7			
28							6.8	6.4	6.7			
29												
30												
31												
MONTH												

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBE	R	Γ	DECEMBE	R		JANUARY	7
1 2 3 4 5	  	  	  	6.3 6.2 6.2 6.3 6.5	6.1 6.1 6.0 5.9	6.2 6.2 6.1 6.1 6.3	6.6 6.5 6.5 6.5 6.5	6.4 6.4 6.5 6.5 6.4	6.5 6.5 6.5 6.5 6.5	6.5 6.6 6.4 6.4 6.5	6.4 6.4 6.3 6.4	6.5 6.5 6.4 6.4 6.4
6 7 8 9 10	  6.0	  6.0	  6.0	6.6 6.6 6.7 6.7	6.4 6.5 6.4 6.5 6.6	6.5 6.6 6.5 6.6 6.6	6.5 6.4 6.4 6.5 6.5	6.4 6.4 6.4 6.2	6.5 6.4 6.4 6.4 6.4	6.4 6.5 6.4 6.5 6.5	6.4 6.4 6.4 6.4 6.4	6.4 6.4 6.4 6.4 6.4
11 12 13 14 15	6.1 6.2 6.1 6.1 6.2	$     \begin{array}{r}       6.0 \\       6.0 \\       6.0 \\       6.0 \\       6.0 \\       6.0 \\       \end{array} $	6.0 6.1 6.0 6.1 6.1	6.7 6.6 6.6 6.6 6.6	6.6 6.4 6.5 6.6 6.6	6.6 6.5 6.5 6.6 6.6	6.4 6.4 6.5 6.5 6.5	6.4 6.4 6.3 6.5 6.5	6.4 6.4 6.5 6.5 6.5	6.5 6.4 6.4 6.5 6.5	6.4 6.4 6.3 6.3 6.4	6.4 6.4 6.4 6.4 6.4
16 17 18 19 20	6.2 6.2 6.2 6.2 6.2	6.0 6.0 6.1 6.1 6.1	6.1 6.0 6.2 6.2 6.2	6.6 6.6 6.6 6.6 6.5	6.6 6.5 6.5 6.4 6.4	6.6 6.6 6.5 6.5 6.4	6.6 6.5 6.5 6.5	6.5 6.4 6.4 6.4 6.4	6.5 6.5 6.4 6.4 6.4	6.5 6.5 6.4 6.4	6.4 6.3 6.3 6.2	6.5 6.5 6.4 6.3 6.3
21 22 23 24 25	6.3 6.2 6.2 6.2 6.3	6.2 6.2 6.1 6.2	6.2 6.2 6.2 6.2 6.2	6.5 6.6 6.6 6.6 6.6	6.4 6.4 6.3 6.4 6.5	6.5 6.5 6.4 6.5 6.6	6.5 6.5 6.5 6.5 6.6	6.4 6.4 6.3 6.4 6.5	6.4 6.5 6.4 6.5 6.5	6.3 6.3 6.4 6.4 6.4	6.3 6.3 6.3 6.3 6.3	6.3 6.3 6.3 6.3 6.3
26 27 28 29 30 31	6.2 6.2 6.2 6.2 6.3 6.3	$     \begin{array}{r}       6.1 \\       6.1 \\       6.1 \\       6.2 \\       6.2     \end{array} $	6.2 6.2 6.2 6.2 6.2 6.3	6.6 6.6 6.6 6.6 6.6	6.6 6.5 6.5 6.6	6.6 6.6 6.5 6.6 6.6	6.6 6.6 6.6 6.6 6.6 6.5	6.5 6.5 6.4 6.5 6.5	6.5 6.5 6.5 6.5 6.5 6.5	6.4 6.4 6.3 6.3 6.3	6.3 6.3 6.3 6.3 6.3	6.3 6.3 6.3 6.3 6.3 6.3
MONTH				6.7	5.9	6.5	6.6	6.2	6.5			
		FEBRUARY	ľ		MARCH			APRIL			MAY	
1 2 3 4 5	6.3 6.4 6.4 6.4 6.4	6.3 6.3 6.4 6.4 6.4	6.3 6.4 6.4 6.4 6.4	6.5 6.5 6.5 6.6 6.6	6.4 6.4 6.5 6.5 6.5	6.4 6.5 6.5 6.5 6.5	6.5 6.5 6.5 6.5 6.6	6.5 6.5 6.4 6.4 6.5	6.5 6.5 6.5 6.5 6.5	6.7 6.7 6.7 6.7 6.7	6.6 6.6 6.6 6.5	6.6 6.6 6.6 6.6 6.6
6 7 8 9 10	6.4 6.4 6.4 6.4 6.4	6.4 6.4 6.3 6.3 6.4	6.4 6.4 6.4 6.4 6.4	6.6 6.6 6.5 6.5	6.5 6.5 6.4 6.4	6.5 6.5 6.4 6.4	6.6 6.5 6.5 6.6 6.6	6.5 6.5 6.4 6.5 6.5	6.5 6.5 6.5 6.5 6.5	6.6 6.6 6.6 6.6 6.6	6.5 6.5 6.5 6.5 6.4	6.6 6.6 6.6 6.5
11 12 13 14 15	6.4 6.4 6.5 6.5	6.4 6.4 6.4 6.5	6.4 6.4 6.5 6.5	6.5 6.5 6.5 6.5	$6.4 \\ 6.4 \\ 6.4 \\ 6.4 \\ 6.4$	6.4 6.5 6.4 6.5 6.5	6.6 6.6 6.5 6.5 6.6	6.5 6.4 6.4 6.4 6.5	6.5 6.5 6.5 6.5 6.5	6.6 6.6 6.6 6.6 6.6	6.5 6.5 6.5 6.5 6.5	6.5 6.5 6.5 6.5
16 17 18 19 20	6.5 6.5 6.5 6.5 6.5	6.5 6.5 6.4 6.5	6.5 6.5 6.5 6.5	6.5 6.5 6.4 6.4 6.4	6.4 6.4 6.3 6.3 6.3	6.5 6.4 6.4 6.4 6.4	6.6 6.6 6.6 6.6 6.6	6.5 6.2 6.5 6.5 6.5	6.5 6.5 6.5 6.5 6.5	6.6 6.6 6.6 6.5	6.5 6.5 6.5 6.5 6.3	6.5 6.5 6.5 6.4
21 22 23 24 25	6.5 6.5 6.6 6.6	6.4 6.4 6.5 6.5 6.6	6.4 6.5 6.5 6.6 6.6	6.4 6.4 6.4 6.5	6.1 6.4 6.3 6.4 6.4	6.4 6.4 6.4 6.4 6.4	6.7 6.7 6.6 6.7	6.5 6.6 6.6 6.6 6.6	6.6 6.6 6.6 6.6 6.6	6.5 6.6 6.6 6.6 6.6	6.5 6.5 6.4 6.5	6.5 6.5 6.5 6.5 6.5
26 27 28 29 30	6.6 6.6 	6.6 6.6 6.4 	6.6 6.6 6.5	6.5 6.5 6.4 6.5 6.5	6.4 6.2 6.1 6.4 6.4	6.4 6.4 6.3 6.4 6.5	6.6 6.6 6.6 6.6 6.6	6.6 6.6 6.6 6.6 6.6	6.6 6.6 6.6 6.6 6.6	6.6 6.6 6.6 6.6 6.6	6.5 6.5 6.5 6.5 6.5	6.5 6.5 6.5 6.5
31 MONTH	 6.6	6.3	6.5	6.5 6.6	6.4 6.1	6.5 6.4	 6.7	6.2	6.5	6.6 6.7	6.5 6.3	6.5 6.5

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

## PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST	,	S	EPTEMBE	ER
1	6.6	6.4	6.5	6.8	6.6	6.7	6.5	6.4	6.4	6.6	6.5	6.6
2	6.5	6.4	6.5	6.9	6.7	6.8	6.5	6.4	6.4	6.7	6.6	6.6
3	6.5	6.4	6.5	6.9	6.8	6.8	6.5	6.4	6.4	6.7	6.7	6.7
4	6.5	6.4	6.5	6.9	6.8	6.9	6.5	6.4	6.5	6.7	6.6	6.7
5	6.5	6.4	6.5	6.9	6.8	6.9	6.5	6.4	6.5	6.7	6.7	6.7
6	6.5	6.4	6.5	6.9	6.8	6.9	6.5	6.4	6.5	6.7	6.7	6.7
7	6.6	6.4	6.5	6.9	6.4	6.7	6.5	6.4	6.5	6.7	6.7	6.7
8	6.5	6.4	6.5	7.0	6.8	6.9	6.4	6.3	6.4	6.7	6.6	6.7
9	6.6	6.4	6.5	7.0	6.8	6.8	6.4	6.3	6.3	6.7	6.6	6.7
10	6.6	6.4	6.5	6.9	6.8	6.8	6.4	6.3	6.3	6.7	6.6	6.7
11	6.6	6.4	6.5	6.9	6.7	6.8	6.4	6.4	6.4	6.8	6.7	6.7
12	6.6	6.2	6.4	6.8	6.6	6.7	6.4	6.3	6.4	6.8	6.6	6.6
13	6.5	6.2	6.4	6.8	6.6	6.7	6.3	5.8	6.3	6.7	6.6	6.6
14	6.6	6.4	6.5	6.8	6.7	6.7	6.4	6.3	6.4	6.7	6.6	6.6
15	6.6	6.5	6.6	6.7	6.7	6.7	6.4	6.3	6.4	6.7	6.6	6.6
16	6.6	6.5	6.6	6.7	6.6	6.7	6.4	6.2	6.3	6.7	6.6	6.6
17	6.6	6.6	6.6	6.7	6.6	6.6	6.3	6.2	6.3	6.7	6.6	6.7
18	6.6	6.5	6.6	6.7	6.6	6.6	6.4	6.2	6.3	6.7	6.5	6.6
19	6.6	6.1	6.5	6.6	6.5	6.6	6.5	6.3	6.4	6.7	6.5	6.6
20	6.5	6.4	6.5	6.7	6.6	6.6	6.5	6.3	6.4	6.7	6.6	6.7
20 21 22	6.5 6.6	6.5 6.5	6.5 6.6	6.6 6.5	6.4 6.4	6.5 6.4	6.5 6.5	6.4 6.4	6.4 6.4 6.4	6.8 6.8	6.6 6.5	6.7 6.6
23	6.6	6.6	6.6	6.4	6.3	6.3	6.5	6.4	6.4	6.6	6.4	6.5
24	6.7	6.6	6.6	6.4	6.3	6.4	6.4	6.3	6.3	6.8	6.4	6.6
25	6.7	6.6	6.6	6.4	6.3	6.3	6.4	6.3	6.4	6.8	6.7	6.8
26	6.6	6.5	6.6	6.4	6.3	6.3	6.4	6.3	6.3	6.8	6.7	6.8
27	6.6	6.3	6.5	6.4	5.8	6.3	6.4	6.3	6.4	6.8	6.8	6.8
28	6.6	6.0	6.4	6.3	6.2	6.3	6.4	6.2	6.3	6.8	6.8	6.8
29 30 31	6.7 6.7	6.1 6.4	6.4 6.6	6.3 6.5 6.5	6.2 6.3 6.4	6.3 6.4 6.5	6.4 6.4 6.6	6.3 6.0 6.4	6.4 6.3 6.5	6.9 6.8	6.8 6.7 	6.8 6.8
MONTH	6.7	6.0	6.5	7.0	5.8	6.6	6.6	5.8	6.4	6.9	6.4	6.7

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# PH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	(	OCTOBEI	R	N	OVEMBE	ER	E	ECEMBE	ER	l	JANUAR	Y
1	6.8	6.8	6.8	6.8	6.7	6.7						
2	6.9	6.7	6.8	6.8	6.7	6.8						
3	6.8	6.7	6.8	6.8	6.7	6.7						
4	6.8	6.6	6.7	6.8	6.7	6.8						
5	6.8	6.7	6.8	6.9	6.8	6.8						
6	6.7	6.3	6.6	6.9	6.8	6.8						
7	6.7	6.5	6.6	6.9	6.8	6.8						
8	6.8	6.6	6.7	6.9	6.8	6.8						
9	6.8	6.7	6.8	6.9	6.8	6.9						
10	6.8	6.7	6.8	6.9	6.8	6.8						
11	6.8	6.7	6.8	6.8	6.7	6.8						
12	6.8	6.7	6.8	6.9	6.7	6.8						
13	6.8	6.8	6.8	6.9	6.8	6.9						
14	6.8	6.8	6.8	6.9	6.8	6.9						
15	6.8	6.7	6.8	7.0	6.9	6.9						
16	6.8	6.7	6.7	7.0	6.9	6.9						
17	6.7	6.6	6.6	6.9	6.8	6.9						
18	6.7	6.6	6.7	6.8	6.7	6.8						
19	6.8	6.7	6.7	6.8	6.7	6.8						
20	6.8	6.7	6.7	6.9	6.8	6.8						
21	6.8	6.7	6.8	6.9	6.6	6.8						
22	6.8	6.7	6.8	6.6	6.3	6.4						
23	6.8	6.6	6.7	6.4	6.3	6.3						
24	6.8	6.6	6.7	6.5	6.4	6.4						
25	6.6	6.6	6.6	6.5	6.2	6.4						
26	6.7	6.6	6.7	6.5	6.3	6.4						
27	6.7	6.6	6.6	6.5	6.3	6.4						
28	6.7	6.6	6.7	6.4	6.3	6.4						
29	6.7	6.6	6.7	6.7	6.3	6.6						
30	6.7	6.6	6.6	6.7	6.5	6.6						
31	6.8	6.6	6.7									
MONTH	6.9	6.3	6.7	7.0	6.2	6.7						

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST	,	SI	EPTEMBI	ER
1												
2										17.7	17.0	17.3
3										17.6	16.7	17.1
4							19.1	16.9	18.0	17.7	16.0	16.9
5							18.1	17.0	17.6	18.1	15.9	16.8
6							17.9	15.4	16.8	17.5	16.4	17.0
7							16.7	13.4	15.1	18.1	17.3	17.7
8							16.8	13.5	15.2	18.1	17.0	17.4
9							17.0	14.4	15.8	17.5	16.5	16.9
10							17.3	15.0	16.3	17.4	15.9	16.6
11							17.8	15.8	16.6	17.6	16.3	16.9
12							16.8	16.3	16.5	17.6	16.1	16.7
13							16.6	15.5	16.0	16.8	15.6	16.2
14							16.9	14.9	15.9	17.1	15.2	16.2
15							17.5	15.9	16.5	17.3	15.9	16.6
16										18.9	16.7	17.1
17							17.2	16.1	16.6	18.8	16.5	17.3
18							18.1	16.2	17.0	16.5	15.3	16.0
19							17.9	16.0	17.0	16.1	14.0	15.0
20							18.2	16.5	17.4	15.4	13.3	14.3
21							18.2	16.8	17.5	15.7	12.7	14.0
22							17.6	16.8	17.1			
23							17.7	16.6	17.2			
24							18.4	16.7	17.4			
25							18.6	16.7	17.5			
26							18.8	16.7	17.7			
27							19.0	17.0	18.0			
28							19.1	17.4	18.1			
29												
30												
31												
MONTH												

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBE	R		DECEMBE	R		JANUARY	(
1 2 3 4 5	  	  	   	16.5 17.6 16.1 15.9 13.5	13.6 15.1 15.4 13.5 10.8	14.9 16.0 15.8 15.2 12.3	10.5 9.3 8.6 8.4 8.8	7.6 6.3 6.5 5.7 6.1	9.4 7.6 7.3 6.9 7.4	9.4 9.8 10.2 11.1 10.8	6.6 7.3 7.9 8.7 8.5	7.9 8.5 9.0 9.8 9.6
6 7 8 9 10	16.0 15.1 15.1 16.1	14.0 12.6 14.0 14.0	14.9 13.9 14.5 15.0	12.8 13.4 13.0 11.7 11.1	9.7 9.9 10.4 8.8 8.4	11.1 11.5 11.7 10.1 9.7	9.6 12.3 10.9 10.2 11.4	8.4 9.5 8.8 8.9 9.6	9.0 10.8 9.8 9.6 10.4	10.6 9.8 11.4 9.8 10.0	9.2 8.1 8.4 7.3 6.9	9.9 9.0 10 8.4 8.3
11 12 13 14 15	16.3 16.3 15.6 15.0 14.1	14.5 14.1 14.4 13.6 11.5	15.3 15.1 15.0 14.3 13.0	10.7 12.0 12.1 10.7 10.4	8.7 10.6 9.7 8.3 7.1	9.7 11.4 11.3 9.3 8.7	9.6 8.7 8.4 6.0 5.6	8.0 7.2 6.0 4.1 3.6	8.9 7.9 7.5 5.2 4.5	10.3 10.9 11.9 11.1 8.4	7.7 8.3 10.4 7.3 6.4	8.9 9.6 11.2 9.3 7.3
16 17 18 19 20	13.2 12.7 13.5 14.5 15.5	10.6 9.5 10.9 13.4 13.4	11.6 11.1 12.2 13.9 14.3	10.2 11.7 12.5 13.4 13.3	7.6 8.6 9.5 11.1 11.8	8.9 10.2 11.0 12.1 12.4	6.1 6.9 6.7 5.7 3.2	3.2 4.4 4.1 2.7 1.1	4.5 5.4 5.2 4.9 2.2	8.2 5.3 4.1 4.3 6.1	5.3 2.8 1.8 2.5 2.9	6.8 4.0 2.9 3.3 4.4
21 22 23 24 25	15.7 15.4 14.6 15.3 15.4	14.0 14.2 13.6 13.3 12.2	14.7 14.6 14.0 14.0 13.7	12.8 13.6 13.2 13.6 12.6	11.8 11.8 12.8 12.6 8.6	12.3 12.6 13.0 13.0 10.8	5.2 7.1 8.6 5.8 5.2	1.9 3.8 5.3 4.5 3.6	3.6 5.4 7.4 5.0 4.5	7.6 6.3 4.0 4.0 5.9	4.8 4.0 1.3 0.4 2.4	6.0 5.5 2.2 2.1 3.8
26 27 28 29 30 31	15.3 15.8 15.9 16.0 16.7 16.6	12.3 13.4 14.5 14.4 14.4 14.2	13.6 14.4 15.0 14.9 15.3 15.2	9.9 9.0 9.9 10.0 10.2	7.7 7.5 8.0 8.0 8.2	8.7 8.2 8.8 8.9 9.2	5.8 5.4 5.7 6.8 8.3 8.8	4.1 3.4 3.1 3.7 5.4 6.5	4.7 4.3 4.3 5.3 6.8 7.6	7.8 6.5 4.8 4.0 5.9 6.0	$\begin{array}{c} 4.0 \\ 4.4 \\ 3.4 \\ 2.3 \\ 4.0 \\ 4.9 \end{array}$	5.6 5.4 4.0 3.2 4.8 5.3
MONTH				17.6	7.1	11.3	12.3	1.1	6.6	11.9	0.4	6.6
		FEBRUARY	C		MARCH			APRIL			MAY	
1 2 3 4 5	6.0 5.6 6.1 7.1 7.6	4.5 4.2 4.6 4.6 3.8	5.2 4.7 5.2 5.5 5.4	5.9 6.6 7.1 7.9 9.4	3.5 2.6 3.3 3.1 5.1	4.8 4.2 4.7 5.3 6.8	11.4 11.3 12.4 13.8 15.0	10.2 7.9 7.0 8.0 8.6	10.9 9.9 9.2 10.5 11.4	14.6 13.0 13.8 13.8 11.3	10.3 9.4 9.3 9.0 10.3	12.0 11.0 11.2 11.3 10.8
6 7 8 9 10	7.6 8.1 9.3 8.9 8.3	4.4 4.8 6.6 7.4 4.1	5.9 6.4 7.9 8.1 6.5	9.8 9.9 8.6 7.8 8.6	5.2 4.9 4.8 3.9 4.7	7.1 7.4 7.3 5.6 6.4	15.1 12.3 13.8 16.3 16.9	10.1 11.8 11.1 10.8 10.2	12.2 12.0 12.1 12.9 13.1	14.5 15.2 16.0 16.0 15.5	10.0 10.0 11.2 11.8 13.0	11.9 12.4 13.4 13.9 13.8
11 12 13 14 15	5.5 7.4 6.5 7.7 8.9	2.7 3.8 4.5 5.9 5.4	4.0 5.3 5.5 6.6 6.9	8.7 10.6 11.8 9.6 9.8	4.8 4.9 7.1 6.7 5.4	6.3 7.4 9.1 8.6 7.4	16.6 13.5 11.9 14.4 15.1	11.2 11.9 10.3 9.2 9.0	13.7 12.7 11.3 11.3 11.6	16.3 16.9 17.0 16.6 14.6	12.2 12.9 13.7 14.3 13.4	14.0 14.7 15.1 15.2 14.2
16 17 18 19 20	9.1 7.9 7.0 8.0 6.5	6.6 4.9 3.6 3.6 5.8	7.8 6.4 5.0 5.5 6.2	7.8 6.6 9.3 9.2 10.9	6.5 5.4 4.5 4.7 5.2	7.1 6.1 6.5 6.7 7.7	14.6 15.1 16.0 15.5 15.9	8.7 8.2 9.4 10.7 11.3	11.3 11.2 12.3 12.9 13.4	14.7 14.9 15.6 15.6 14.9	11.7 11.6 13.1 14.0 13.9	13.3 13.4 14.4 14.8 14.3
21 22 23 24 25	8.8 10.8 10.8 8.7 9.7	6.4 6.7 6.6 7.8 6.3	7.4 8.3 8.4 8.4 7.7	9.8 8.3 12.6 13.0 13.7	6.0 7.2 8.0 8.6 8.3	8.0 7.8 9.8 10.2 10.5	15.7 14.7 12.9 11.2 13.7	11.2 11.9 9.7 8.0 7.9	13.2 13.1 11.6 9.3 10.2	15.6 15.8 16.2 14.7 14.3	13.3 13.0 13.7 13.1 12.0	14.2 14.3 14.8 14.0 13.1
26 27 28 29 30 31	9.3 7.4 6.6 	5.0 5.7 4.6	6.9 6.6 5.7 	14.0 11.2 10.4 13.2 14.0 12.2	9.0 10.1 9.1 8.4 8.6 10.2	11.1 10.6 9.8 10.3 10.9 10.9	10.9 12.7 12.3 12.8 13.2	8.7 8.8 8.4 9.7 11.3	10 10.6 10.2 11.2 12.1	15.2 15.0 14.7 13.9 14.7 15.3	11.7 12.2 12.8 11.7 13.0 12.8	13.4 13.7 13.7 13.0 13.8 14.0
MONTH	10.8	2.7	6.4	12.2	2.6	7.8	16.9	7.0	11.6	13.3	9.0	13.5

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		SI	EPTEMBE	ER
1	14.4	13.2	13.9	17.7	16.4	17.0	18.4	17.0	17.7	18.8	16.7	17.7
2	13.6	13.1	13.4	17.1	16.0	16.6	18.6	16.8	17.6	18.7	16.1	17.4
3	14.3	13.4	13.8	17.2	16.1	16.6	18.6	16.4	17.5	18.6	16.6	17.5
4	15.8	13.8	14.7	17.3	16.3	16.8	18.9	16.6	17.7	18.0	15.2	16.6
5	16.5	14.3	15.4	18.3	16.5	17.3	18.6	17.0	17.8	17.8	15.8	16.8
6	16.7	14.8	15.8	17.4	16.6	17.0	18.5	16.9	17.7	17.5	15.5	16.4
7	16.9	15.2	16.0	16.9	16.3	16.7	17.7	17.2	17.4	17.4	14.9	16.2
8	16.5	15.7	16.1	17.4	15.6	16.4	17.4	17.1	17.3	17.5	14.6	16.0
9	17.7	15.6	16.4	17.5	15.2	16.3	18.2	17.1	17.6	17.6	14.7	16.1
10	17.6	15.9	16.7	17.7	16.1	16.9	18.4	17.2	17.7	17.5	14.8	16.2
11	16.8	16.2	16.5	18.3	16.8	17.4	19.0	17.1	18.0	17.8	15.6	16.6
12	16.9	16.3	16.5	17.9	17.1	17.5	19.1	17.1	18.0	17.7	14.8	16.3
13	17.4	16.1	16.6	17.7	16.7	17.1	19.3	17.4	18.3	17.8	15.0	16.4
14	17.9	15.4	16.6	17.9	16.6	17.2	19.5	17.5	18.4	17.6	15.2	16.4
15	18.4	16.3	17.1	17.7	16.8	17.3	19.7	17.6	18.6	18.1	15.7	16.9
16	17.8	15.4	16.5	18.2	16.9	17.5	19.1	17.8	18.5	17.3	16.2	16.8
17	17.2	15.3	16.1	18.8	17.1	17.8	19.2	17.8	18.4	18.1	16.2	17.0
18	16.0	14.1	15.2	18.6	17.2	17.8	18.9	18.1	18.4	17.7	15.3	16.5
19	17.0	14.7	15.5	19.2	17.3	18.0	19.2	17.9	18.5	17.8	15.1	16.4
20	15.5	14.5	15.0	19.0	17.1	17.8	19.5	17.9	18.7	18.1	15.6	16.8
21	15.7	14.1	14.9	18.9	17.1	17.9	20.2	18.1	19.0	18.2	16.0	17.1
22	16.4	14.2	15.3	18.9	17.3	18.0	19.3	17.8	18.6	18.4	16.5	17.4
23	17.3	14.9	16.1	19.2	17.5	18.2	18.8	18.0	18.4	18.3	16.1	17.2
24	17.6	14.9	16.2	18.6	17.0	17.8	19.3	17.7	18.3	18.1	16.0	17.1
25	17.4	15.2	16.3	19.6	17.3	18.3	19.2	18.0	18.5	18.5	17.4	17.8
26 27 28 29 30 31	16.5 17.8 18.9 17.0 17.6	16.0 16.3 16.4 15.9 15.9	16.2 16.9 16.9 16.3 16.7	19.8 20.4 18.6 18.0 18.2 18.5	17.7 18.0 17.8 17.6 17.3 17.4	18.7 18.9 18.2 17.8 17.7 17.8	18.8 18.6 19.1 18.6 19.4 19.4	17.5 17.3 17.4 17.9 18.6 17.6	18.1 17.9 18.2 18.3 19.0 18.5	17.9 18.4 17.7 17.2 16.3	17.4 16.6 15.6 15.5 14.3	17.6 17.4 16.7 16.8 15.3
MONTH	18.9	13.1	15.9	20.4	15.2	17.5	20.2	16.4	18.1	18.8	14.3	16.8

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBE	ર	N	OVEMBE	ER	D	ECEMBE	R		JANUAR	Y
1	16.8	14.1	15.5	11.9	8.2	10.1						
2	16.9	14.8	15.9	12.1	9.1	10.8						
3	17.2	15.3	16.1	11.6	7.7	9.6						
4	16.9	14.3	15.6	12.3	8.1	10.2						
5	16.9	15.4	16.1	13.3	10.2	11.7						
6	16.8	16.2	16.5	14.0	11.1	12.3						
7	16.9	16.4	16.6	13.6	10.5	11.9						
8	17.0	15.8	16.6	13.2	9.5	11.4						
9	16.6	15.2	15.9	14.2	10.9	12.5						
10	17.1	16.1	16.5	13.0	8.8	11.4						
11	17.6	16.0	167	10.9	74	8.9						
11 12	17.6 17.5	16.0 16.3	16.7 16.8	10.8 10.7	7.4 7.1	8.9 8.8						
12	17.3	15.8	16.6	10.7	8.0	0.0 10.1						
						10.1						
14	16.9	14.7	15.6	13.7	10.8	12.2						
15	16.4	14.4	15.2	14.4	12.6	15.5						
16	14.9	12.6	14.0	14.3	9.8	12.9						
17	14.5	11.4	12.8	9.8	6.7	8.3						
18	15.1	11.2	13.0	8.3	5.4	6.7						
19	16.1	12.9	14.3	8.5	4.8	6.7						
20	16.2	13.3	14.7	9.3	7.3	8.5						
21	16.0	10.5	14.0	10.2	0.0	0.0						
21	16.3	13.5	14.9	10.3	9.0	9.8						
22	15.3	12.6	14.2	9.0	6.7	8.3						
23	13.9	10.8	12.3	8.0	5.9	7.0						
24	12.3	9.7	11.1	10.0	7.4	8.4						
25	10.6	9.3	9.8	8.1	5.9	6.8						
26	11.1	8.6	9.6	8.2	5.0	6.4						
27	10.6	7.5	9.1	8.7	6.5	7.7						
28	10.8	8.2	9.5	11.4	8.7	9.9						
29	10.6	7.3	8.7	12.6	9.6	11.6						
30	11.1	6.9	8.8	9.7	7.2	8.7						
31	11.6	7.6	9.5									
MONTH	17.8	6.9	13.8	14.4	4.8	9.8						

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST	,	S	EPTEMBI	ER
1												
2												
3												
4							7.9	7.5	7.7			
5							7.8	7.5	7.7			
6							8.3	7.6	7.8			
7							8.7	8.0	8.3			
8							8.7	8.0	8.3			
9							8.4	7.9	8.1			
10							8.2	7.7	7.9			
11							8.0	7.3	7.8			
12							7.8	7.6	7.7			
13							8.3	7.7	8.1			
14							8.5	8.1	8.3			
15							8.3	8.0	8.2			
16												
17												
18												
19												
20												
21												
21 22												
22 23												
23 24												
24												
23												
26												
27												
28												
29												
30												
31												
MONTH												

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER	1	Ν	OVEMBE	R	D	ECEMBEI	R		JANUARY	
1 2							8.4 8.9	7.6 7.9	8.0 8.4	10.6 10.4	9.7 9.7	10.2 10.1
3							8.6	7.8	8.2	10.3	9.5	9.9
4 5							8.6	7.6	8.1	10.0 9.9	9.2 9.1	9.6 9.5
6										9.6	9.1	9.4
7 8										9.9 9.7	9.3 8.8	9.6 9.2
9 10										10.0 10.1	9.1 9.1	9.6 9.6
11										9.9	8.9	9.5
12 13										9.6 9.9	8.8 9.0	9.2 9.2
14	6.8	6.3	6.6				11.7	10.8	11.2	10.7	9.8	10.2
15	7.2	6.5	6.8				11.9	11.0	11.5	10.9	10.2	10.6
16 17	7.4	6.7	7.1				11.9	10.9	11.4	10.9 11.9	10.1 10.9	10.5 11.5
18 19							11.9 12.2	$10.9 \\ 11.1$	11.4 11.4	12.3 12.0	11.4 11.2	11.9 11.6
20							13.0	12.1	12.5	11.8	10.6	11.2
21 22							12.7 12.0	$11.4 \\ 10.8$	12.1 11.5	11.1 11.2	10.2 10.4	10.7 10.7
23 24				 9.3	7.2	8.1	11.4 11.7	10.4 11.1	10.8 11.4	12.4 12.7	11.2 11.4	11.9 12.1
24				8.7	7.2	8.0	11.7	11.1	11.4	12.1	10.8	11.5
26				9.2	8.0	8.6	11.6	11.0	11.4	11.4	10.2	10.8
27 28				9.2 8.8	8.2 7.9	8.7 8.3	11.9 12.1	11.2 11.0	11.6 11.6	11.6 12.1	10.7 11.5	11.1 11.8
29 30				8.8 8.9	8.2 7.9	8.5 8.3	11.8 11.2	10.6 10.1	11.2 10.7	12.4 11.6	$11.6 \\ 11.0$	12.0 11.4
31							10.8	9.9	10.3	11.3	10.8	11.1
MONTH										12.7	8.8	10.6
		FEBRUARY			MARCH			APRIL			MAY	
1 2	11.4 11.6	10.7 11.0	11.1 11.3	12.6 13.0	11.7 11.1	12.0 12.2	9.9 10.6	9.2 9.2	9.5 9.9	9.5 10.0	8.2 8.8	8.9 9.4
3 4	11.4 11.3	10.6 10.5	11.1 11.0	11.9 12.0	10.6 10.2	11.3 11.2	11.1 10.8	8.7 9.2	10.3 10.0	9.9	8.6	9.3
5	11.7	10.3	11.0	11.2	9.8	10.6	10.8	9.1	10			
6 7	11.5 11.2	10.2 10.0	10.8 10.6	11.2 11.2	9.7 9.6	10.5 10.4	10.3 10.0	9.0 9.7	9.7 9.9			
8	10.5 10.1	9.5 9.7	10.0 9.9	11.2 11.6	9.9 10.2	10.4 11.0	10.2 10.2	9.2 8.7	9.8 9.6			
10	11.1	9.8	10.4	11.3	9.9	10.6	10.2	8.9	9.0 9.7			
11	11.7	10.6	11.2	11.1	9.8	10.5	10.3	8.9	9.7	9.9	8.9	9.4
12	11.4 11.1	10.1 10.1	10.8 10.6	11.1 10.3	9.0 8.8	10.2 9.6	10.0	9.6 9.9	9.8 10.2	9.7 9.5	8.8 8.8	9.3 9.1
14 15	10.5 10.7	9.9 9.4	10.2 10.1	10.2 10.9	9.3 9.4	9.7 10.1	$11.0 \\ 11.0$	9.7 9.3	10.4 10.2	9.3 9.4	8.7 9.0	9.0 9.2
16	10.1	9.3	9.7	10.6	9.8	10.3	11.2	9.5	10.4	9.8	9.1	9.4
17 18	$10.8 \\ 11.4$	9.8 10.0	10.3 10.8	10.9 11.4	10.3 9.7	10.7 10.6	11.2 10.9	9.4 9.1	$10.4 \\ 10.0$	9.9 9.5	9.0 8.9	9.4 9.1
19 20	11.4 11.0	9.9 10.5	10.8 10.8	11.1 10.8	9.6 9.5	10.4 10.4	10.3 9.9	9.0 9.0	9.6 9.4	9.2 9.1	8.8 8.8	9.0 9.0
20	11.0	10.2	10.6	11.3	10.2	10.7	10.0	8.1	8.9	9.3	8.8	9.0
22 23	11.3 11.3	10.1 10.0	10.8 10.7	11.1 10.8	10.8 9.6	10.9 10.3	9.1 9.2	8.3 8.6	8.7 8.8	9.4 9.1	8.7 8.2	9.0 8.8
24	11.0	10.4	10.7	10.8	9.8	10.4	9.6	8.4	9.0	9.4	8.4	9.0
25 26	11.5	10.5	11.1	10.9	9.5	10.3	9.2	7.9 8.6	8.7	9.7	9.1	9.4
26 27	12.1 11.9	10.7 11.3	11.4 11.6	10.9 10.5	9.6 10.1	10.2 10.3	9.5 9.4	8.6 8.2	9.0 8.9	9.8 9.7	9.0 9.0	9.4 9.3
28 29	12.1	11.3	11.7 	10.4 10.4	9.9 9.2	10.1 9.9	9.8 9.6	8.7 8.6	9.2 9.1	9.6 9.8	9.1 9.2	9.3 9.5
30 31				10.3 9.8	8.8 9.1	9.6 9.5	9.1	8.4	8.8	9.5 9.6	9.0 9.1	9.3 9.3
MONTH	12.1	9.3	10.8	13.0	8.8	10.5	11.2	7.9	9.6			

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

## DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		SI	EPTEMBE	ER
1 2 3	9.4 9.5 9.4	9.1 9.0 9.1	9.2 9.4 9.3	 	 	  		 		8.7 8.8 8.6	8.3 8.2 8.2	8.5 8.5 8.4
4 5	9.3 9.4	8.7 8.9	9.1 9.1							9.0 8.8	8.4 8.3	8.7 8.6
6 7 8	9.2 9.2 9.2	8.8 8.8 8.9	9.0 9.0 9.0	 8.8	 8.2	 8.5				8.9 8.4	7.9 7.8	8.4 8.1
9 10	9.2 9.2	8.8 8.8	9.0 9.0	8.8 8.5	8.1 7.7	8.5 8.1						
11 12 13	9.2 9.2 9.0	8.9 8.0 8.0	9.1 8.9 8.7					 			 	
14 15	8.9 8.9	8.2 8.3	8.6 8.6									
16 17 18	9.4 9.1 9.4	8.5 8.6 8.7	8.8 8.9 9.0									
19 20	9.2 9.2	8.5 8.6	8.9 8.9									
21 22 23	9.1 9.4 9.0	8.6 8.6 8.3	8.9 9.0 8.7									
23 24 25	9.0 8.7	8.2 8.1	8.6 8.4									
26 27 28	8.7 8.9	8.2 8.0	8.4 8.4									
28 29 30	9.3	7.7  	8.3									
31 MONTH												

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

DAY	MAX	MIN	MEAN									
	(	OCTOBE	ર	Ň	OVEMBE	ER	E	ECEMBE	R	j	JANUAR	Y
1				8.3	7.3	7.8						
2				7.8	7.0	7.4						
3				8.3	7.2	7.7						
4				8.0	6.9	7.5						
5				7.6	6.7	7.1						
6				7.2	6.5	6.9						
7				7.5	6.5	7.0						
8				7.6	6.4	7.0						
9				7.2	6.1	6.7						
10				7.3	6.1	6.6						
11				7.7	6.7	7.3						
12				8.0	7.0	7.5						
13				7.8	6.8	7.4						
14				7.3	6.6	7.0						
15				7.3	6.6	6.9						
16												
17												
18	8.6	7.4	8.0									
19	7.7	6.5	7.1									
20	7.6	6.4	7.0									
21	7.3	6.5	6.9									
22	8.2	6.9	7.2									
23	8.7	7.8	8.2									
24	9.0	8.2	8.6									
25	9.0	8.1	8.7									
26	8.8	8.1	8.5									
27	9.2	8.1	8.6									
28	8.8	7.8	8.3									
29	9.0	8.0	8.5									
30	9.2	7.6	8.4									
31	8.7	7.5	8.1									
MONTH												

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		SI	EPTEMBI	ER
1												
2												
3												
4							89	86	87			
5							87	85	86			
6							89	85	87			
7							90	88	89			
8							90	88	89			
9							89	87	88			
10							88	85	87			
10							00	05	07			
11							88	81	86			
12							86	84	85			
13							90	84	88			
14							92	89	90			
15							92	89	90			
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

# 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBE	ER	I	DECEMBE	ર		JANUARY	7
1 2							78 78	73 73	74 75	94 94	90 90	92 92
3							76	71	73	94	90	92
4 5							74	69 	72	93 92	89 88	91 90
6										91	88	89
7										91	87	89
8 9										89 89	86 86	87 88
10										90	85	88
11										90 80	85	87 87
12 13										89 97	84 86	90
14 15	71 71	67 68	69 69				96 97	92 94	94 95	97 96	94 92	95 94
16	72	68	70							94	91	93
17							98	95	97	96	92	94
18 19							98 97	94 94	97 96	96 95	93 92	94 94
20							99	96	98	94 94	91	93
21							99	96	98	94	91	92
22 23							99 98	95 94	97 97	93 95	90 91	91 93
24				94	74	83	98	95	96	95	93	94
25				81	74	78	97	94	95	95	91	93
26 27				83 83	76 76	79 79	96 97	94 94	95 96	94 96	91 93	93 94
28				80	75	77	97	94	95	98	95	97
29 30				80 81	77 75	79 78	97 95	92 92	94 94	98 97	95 93	96 95
31							95	91	93	96	93	94
MONTH										98	84	92
		FEBRUARY	ŕ		MARCH			APRIL			MAY	
1 2	95 96	92 92	94 94	102 104	99 92	101 100	95 96	90 90	92 94	93 94	86 89	89 92
3	95	91	93	97	93	94	99	87	96	94 94	86	92
4 5	95 96	92 91	94 93	97 95	92 91	94 93	99 101	94 95	96 98			
6	95	90	93	95	92	93	99	95	97			
7	94	89	92	95	90	92	100	97	98			
8 9	92 93	88 88	90 90	95 95	90 91	93 94	100 101	95 95	97 97			
10	92	89	91	95	90	93	102	96	99			
11	93	90	91	94	89	92	102	97	100	101	96	98
12 13	93 92	89 88	91 91	94 92	86 87	90 89	102 102	97 97	$\begin{array}{c} 100 \\ 100 \end{array}$	100 100	96 96	98 97
14 15	92 91	88 86	89 89	91 93	87 88	89 90	104 103	100 99	102 101	99 97	95 95	96 96
16 17	89 92	86 88	87 90	93 95	88 90	91 92	105 105	99 97	102 101	99 99	95 95	97 97 96
18 19	93 93	88 89	91 92	96 93	89 88	92 91	104 101	96 92	100 97	98 97	94 94	96 95
20	95 95	91	92 93	93 96	89	93	101	92 92	97	97	92	95 94
21	98	91	95	99	95	97	100	86	91	96	91	95
22 23	100 100	97 95	98 98	100 99	97 96	99 98	91 89	86 85	89 87	96 96	93 88	95 94 93 94
24	101	96	98	101	97	99	88	81	85	97	88	93 94
25	102	98	100	102	97	99	86	81	83	97	94	96
26 27	103 103	99 99	101 101	102 101	98 97	100 99	88 87	83 83	86 85	98 99	95 95	97 96
27 28	102	99	100	99	94	96	90	86	88	98	95	97
29 30				97 96	92 90	94 93	92 91	86 85	89 88	99 98	95 95	97 97
31				94	90	92				99	96	97
MONTH	103	86	94	104	86	94	105	81	94			

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

## DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		SI	EPTEMBE	ER
1	97	94	96							97	94	95 95
2	97	93	96							97	92	95
3	98	95	96							96	91	94
4	98	93	96							97	94	96
5	100	96	98							99	93	95
6	99	96	97							96	87	93
7	99	96	98							90	87	88
8	100	97	98	96	91	94						
9	100	97	98	95	91	93						
10	101	97	99	93	86	90						
11	101	98	100									
12	101	88	98									
13	98	88	95									
14	97	92	95									
15	98	94	96									
16	104	94	97									
17	99	94	96									
18	99	94	96									
19	100	94	96									
20	97	92	95									
21	96	93	94									
22	99	93	96									
23	96	92	94									
24	97	91	94									
24 25	94	90	92									
26	95	89	92									
27	98	90	93									
28	105	87	92									
29												
30												
31												
MONTH												

## 0344789265 BOYD BRANCH AT BENT CREEK GAP ROAD NEAR LAKE POWHATAN, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
	(	OCTOBE	ર	N	OVEMBE	ER	D	ECEMBE	R	JANUARY			
1				76	72	74							
2				74	70	72							
3				75	70	73							
4				74	68	71							
5				73	68	71							
5				15	00	/1							
6				71	67	69							
7				72	67	69							
8				72	65	69							
9				71	64	67							
10				68	62	65							
10				00	02	05							
11				70	65	67							
12				72	66	69							
13				74	68	70							
14				72	66	70							
15				75	69	70							
15				15	0)	/1							
16													
17													
18	84	78	82										
19	79	70	75										
20	78	69	74										
20	70	0)	<i>,</i> ,										
21	76	69	73										
22	83	73	76										
23	85	80	82										
24	85	82	84										
25	85	78	82										
26	83	78	80										
27	82	78	80										
28	81	74	78										
29	80	76	78										
30	81	74	78										
31	79	73	76										
	.,												
MONTH													

### 03447894 BENT CREEK AT BENT CREEK GAP NEAR GLEN BALD, NC

LOCATION.--Lat 35°29'37", long 82°36'40", Buncombe County, Hydrologic Unit 06010105, on left bank at upstream side of stone bridge on Bent Creek Gap Road, 0.75 mi northwest of Glen Bald, and 1.1 mi upstream from mouth.

DRAINAGE AREA .-- 8.74 mi<sup>2</sup>.

PERIOD OF RECORD .-- November 2001 to current year.

REVISED RECORDS .-- WDR NC-04-1: 2003(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,080 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

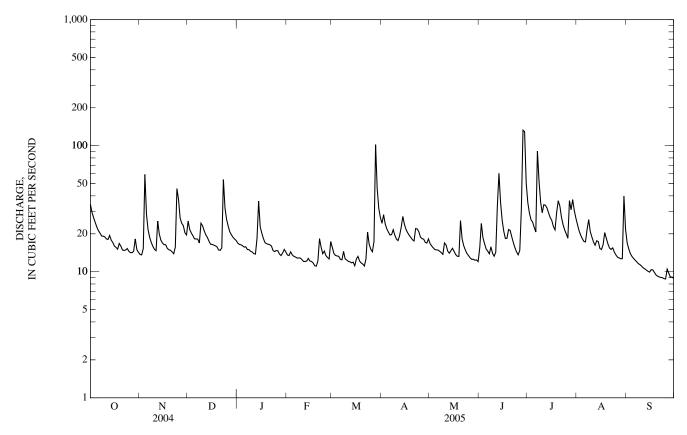
REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record from rating curve extended above 300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record also occurred Sept. 12, 13, 2002. Minimum discharge for current water year also occurred Sept. 30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	14	25	17	14	16	24	17	15	35	24	17
2	30	14	22	16	13	14	28	16	24	29	21	15
3	27	15	20	16	14	13	24	15	19	26	20	14
4	25	59	19	16	14	13	22	15	17	25	18	13
5	23	29	18	16	13	13	21	15	15	22	17	13
6	21	21	18	16	13	13	20	15	15	21	17	12
7	20	19	18	15	13	12	20	15	14	91	22	12
8	19	17	17	15	13	15	22	14	16	53	26	12
9	19	16	24	15	13	13	20	14	14	36	21	11
10	19	15	23	14	13	12	18	17	13	29	19	11
11 12 13 14 15	18 18 19 18 17	15 25 20 18 17	21 20 19 18 17	14 14 18 36 23	12 12 12 13 12	12 12 12 12 12 11	18 19 23 27 24	16 15 14 15 15	14 33 60 36 26	34 34 32 29 27	17 16 18 17 15	$11 \\ 11 \\ 10 \\ 10 \\ 9.9$
16	16	16	16	20	12	13	22	14	21	25	15	10
17	16	16	16	18	12	13	20	14	18	23	16	10
18	15	15	16	17	11	12	19	13	18	21	20	9.9
19	17	15	16	17	11	12	19	13	22	30	18	9.4
20	16	15	15	17	12	12	18	25	21	37	17	9.2
21	15	14	15	16	18	11	18	18	19	33	15	9.1
22	15	14	15	16	16	13	22	16	17	27	15	9.0
23	15	16	54	15	14	21	22	15	15	24	15	9.0
24	15	46	32	14	15	17	21	14	14	22	14	8.8
25	15	38	26	15	13	15	19	13	14	20	14	8.8
26 27 28 29 30 31	14 14 15 18 15 14	27 24 23 20 20	23 21 20 19 18 18	15 14 13 14 15 14	13 13 17 	14 17 102 46 32 27	18 18 17 17 18	13 13 13 12 12 12	15 32 133 129 51	18 37 31 37 31 27	13 13 13 13 40 22	10 9.7 9.0 9.1 8.9
TOTAL	572	633	639	511	371	570	618	458	870	966	561	321.8
MEAN	18.5	21.1	20.6	16.5	13.2	18.4	20.6	14.8	29.0	31.2	18.1	10.7
MAX	34	59	54	36	18	102	28	25	133	91	40	17
MIN	14	14	15	13	11	11	17	12	13	18	13	8.8
CFSM	2.11	2.41	2.36	1.89	1.52	2.10	2.36	1.69	3.32	3.57	2.07	1.23
IN.	2.43	2.69	2.72	2.17	1.58	2.43	2.63	1.95	3.70	4.11	2.39	1.37
STATIST	ICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	2002 - 2005,	BY WATE	R YEAR (W	YY)			
MEAN	11.1	14.0	15.0	11.9	14.4	15.3	17.5	18.1	16.6	17.0	11.0	24.9
MAX	18.5	22.2	20.6	16.5	19.8	21.5	22.8	35.9	29.0	31.2	18.1	69.0
(WY)	(2005)	(2004)	(2005)	(2005)	(2004)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2004)
MIN	4.77	3.61	3.94	7.30	6.94	9.06	7.92	8.24	5.18	4.43	2.22	5.57
(WY)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

# 03447894 BENT CREEK AT BENT CREEK GAP NEAR GLEN BALD, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALEN	NDAR YEAR	FOR 2005 WAT	TER YEAR	WATER YEARS 2002 - 20		
ANNUAL TOTAL ANNUAL MEAN	7,061.3 19.3		7,090.8 19.4		18.6		
HIGHEST ANNUAL MEAN	17.5		17.4		19.4	2005	
LOWEST ANNUAL MEAN HIGHEST DAILY MEAN	663	Sep 17	133	Jun 28	17.9 663	2003 Sep 17, 2004	
LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM	4.3 4.9	Aug 28 Aug 22	8.8 9.0	Sep 24 Sep 19	0.75 0.91	Sep 12, 2002 Sep 7, 2002	
MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE		C	594 5.01	Jun 28 Jun 28	3,000* 9.81	Sep 17, 2004 Sep 17, 2004	
INSTANTANEOUS LOW FLOW	2.21		8.3*	Sep 25	0.71*	Sep 11, 2004 Sep 11, 2002	
ANNUAL RUNOFF (CFSM) ANNUAL RUNOFF (INCHES)	2.21 30.05		2.22 30.18		2.13 28.97		
10 PERCENT EXCEEDS 50 PERCENT EXCEEDS	25 14		29 16		26 15		
90 PERCENT EXCEEDS	6.6		12		8.3		

\* See REMARKS.



### 0344894205 NORTH FORK SWANNANOA RIVER NEAR WALKERTOWN, NC

LOCATION.--Lat 35°41'00", long 82°19'59", Buncombe County, Hydrologic Unit 06010105, on left bank 400 ft downstream of Sugar Springs Cove, 0.6 mi upstream from Burnette Reservoir, and 2.3 mi north of Walkertown.

DRAINAGE AREA .-- 14.5 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1989 to current year.

REVISED RECORDS .-- WDR NC-91-1: 1989(M). WDR NC-04-1: 1989-1998(M), 2000(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,650 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

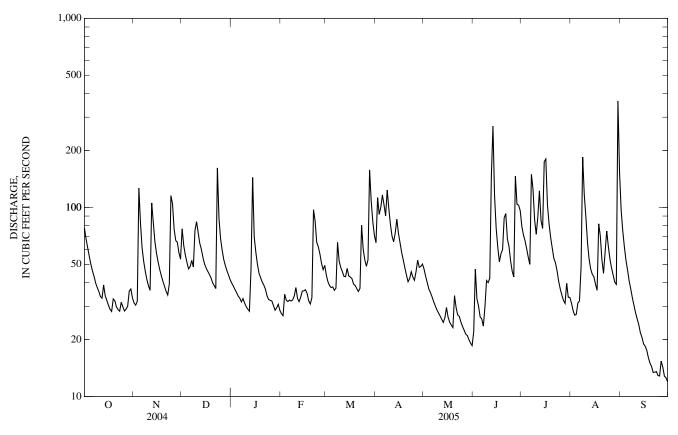
REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record from rating curve extended above 1,000 ft<sup>3</sup>/s on basis of slope area measurement of peak flow. Maximum gage height for period of record from floodmark. Minimum discharge for period of record also occurred Sept. 15, 16, 18, 19, Oct. 3, 4, 1998.

DAV	OCT	NOV	DEC	TAN	FED	MAD	ADD	34437	TUN	11.11		CED
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
$\frac{1}{2}$	78 68	31 30	77 63	40 38	27 27	$44 \\ 40$	65 113	47 43	22 47	80 72	31 29	97 75
3	62	32	56 51	37	35	39	92	40	33 30	67	27	62
4 5	55 50	127 83	51 47	35 34	32 32	38 38	100 116	37 35	30 26	61 55	27 31	53 47
6	46	61	49	33	32	36	103	34	26	50	32	41
7 8	43 40	52 46	52 48	32 33	32 32	37 65	90 123	32 30	24 30	150 125	48 185	37 33
9 10	38 36	42 38	75 84	31 30	34 38	52 48	99 81	29 28	41 40	86 72	117 89	30 28
10	30 34	38 36	84 74	30 29	38	48 46	70	28 27	40 42	72 89	65	28 26
12	33	106	65	28	32	43	66	26	147	122	53	24
13 14	39 34	83 66	60 54	47 144	33 36	43 48	73 87	25 26	269 115	85 77	47 44	22 21
15	32	57	50	70	36	43	73	30	78	174	43	19
16 17	30 29	51 47	48 46	58 50	37 35	43 42	65 58	26 25	62 52	180 103	39 36	18 18
18	28	44	44	45	32	39	53	24	57	82	82	16
19 20	33 32	41 38	42 e40	42 40	31 33	39 37	48 44	23 34	60 88	69 61	71 53	15 14
21	30	36	39	39	97	36	40	30	93	54	45	13
22 23	29 28	34 39	37 162	37 e34	85 65	37 81	42 46	27 27	68 62	51 46	58 75	13 14
24 25	31 30	115 104	87 68	33 32	62 57	60 53	43 41	25 23	52 46	41 37	62 53	13 13
23 26	28	77	59	32 32	51	33 49	41 46	23 22	40	34	33 48	15
27	29	67	53	30	47	53	53	21	146	32	44	14
28 29	30 36	65 58	49 46	29 29	49	158 108	48 49	21 20	104 103	31 40	40 39	13 13
30	37	53	44	31		84	50	19	96	33	365	12
31 TOTAI	33 1,181		41	29		71		19		33 2,292	154	 829
TOTAL MEAN	38.1	1,759 58.6	1,810 58.4	1,251 40.4	1,172 41.9	1,650 53.2	2,077 69.2	875 28.2	2,102 70.1	73.9	2,132 68.8	27.6
MAX MIN	78 28	127 30	162 37	144 28	97 27	158 36	$123 \\ 40$	47 19	269 22	180 31	365 27	97 12
CFSM	2.63	4.04	4.03	2.78	2.89	3.67	4.77	1.95	4.83	5.10	4.74	1.91
IN.	3.03	4.51	4.64	3.21	3.01	4.23	5.33	2.24	5.39	5.88	5.47	2.13
							, BY WATE	`	<i>´</i>			
MEAN MAX	26.9 79.1	35.5 84.6	42.1 79.8	56.5 134	57.2 120	67.0 111	55.7 86.4	44.1 75.3	37.2 78.0	27.0 73.9	31.6 123	36.5 311
(WY) MIN	(1996) 2.49	(1993) 4.88	(1993) 14.8	(1995) 27.6	(1990) 27.7	(1993) 37.1	(2003) 18.6	(2003) 18.9	(1995) 13.5	(2005) 5.71	(1994) 3.96	(2004) 1.92
(WY)	(1999)	(1999)	(1999)	(2004)	(2002)	(2004)	(1995)	(2001)	(1998)	(1998)	(1998)	(1998)

# 0344894205 NORTH FORK SWANNANOA RIVER NEAR WALKERTOWN, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1989 - 2005
ANNUAL TOTAL	21,876	19,130	10.5
ANNUAL MEAN	59.8	52.4	42.7
HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN			58.1 2004 24.1 2002
HIGHEST DAILY MEAN	2,310 Sep 8	365 Aug 30	2,310 Sep 8, 2002
LOWEST DAILY MEAN	10 Jul 23	12 Sep 30	1.5 Sep 14, 1998
ANNUAL SEVEN-DAY MINIMUM	12 Jul 17	13 Sep 24	1.6 Sep 12, 1998
MAXIMUM PEAK FLOW		1,080 Jul 15	7,000* Sep 8, 2004
MAXIMUM PEAK STAGE		5.46 Jul 15	10.33* Sep 8, 2004
INSTANTANEOUS LOW FLOW		11 Sep 30	1.5* Sep 14, 1998
ANNUAL RUNOFF (CFSM)	4.12	3.61	2.95
ANNUAL RUNOFF (INCHES) 10 PERCENT EXCEEDS	56.12 77	49.08 89	40.05 81
50 PERCENT EXCEEDS	34	43	30
90 PERCENT EXCEEDS	20	26	7.2

\* See REMARKS. e Estimated.



### 03450000 BEETREE CREEK NEAR SWANNANOA, NC

LOCATION.--Lat 35°39'11", long 82°24'19", Buncombe County, Hydrologic Unit 06010105, on left bank 0.5 mi downstream of Wolfe Branch, 0.8 mi upstream from Beetree Reservoir dam, 3.8 mi north of Swannanoa, and 4.8 mi above mouth.

DRAINAGE AREA.--5.46 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1926 to September 1975, October 1979 to September 1981, October 1985 to September 1986, and May 1987 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 893: 1928, 1936-37 (M). WSP 953: 1929 (M). WSP 1276: 1932.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 2,726.39 ft above NGVD of 1929. Prior to May 5, 2005, at site 70 ft upstream at datum 2,728.39 ft above NGVD of 1929. Satellite telemetry at station.

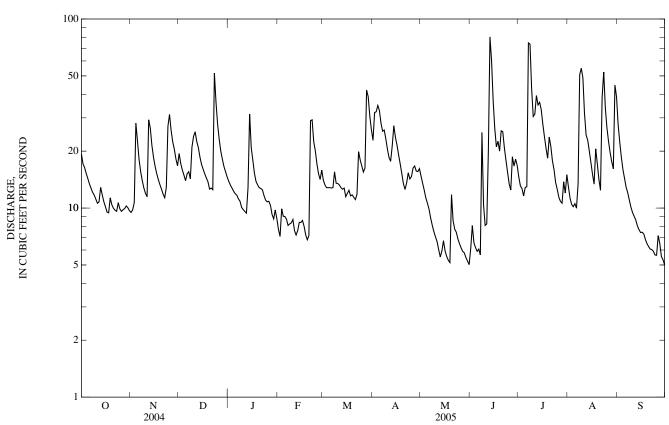
REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 240 ft<sup>3</sup>/s on basis of computation of peak flow over weir. Minimum discharge for period of record also occurred July 25, 1996.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	9.5	19	14	7.7	14	23	15	6.1	15	13	28
2	17	9.8	17	13	7.1	13	32	14	8.1	13	11	22
3	16	11	16	13	9.9	13	32	12	6.5	13	10	19
4	15	28	15	12	9.0	13	35	11	6.2	12	10	16
5	14	23	14	12	9.0	13	33	11	5.9	13	11	14
6 7 8 9 10	13 13 12 12 12 11	18 16 14 13 12	15 16 14 21 24	12 11 11 10 9.8	8.7 8.1 8.2 8.4 8.7	13 13 16 14 13	28 25 26 23 21	9.8 8.9 8.1 7.5 7.0	6.1 5.7 25 10 8.1	13 75 74 43 31	10 13 51 55 49	13 12 11 10 9.5
11	11	11	25	e9.6	e7.6	13	18	6.6	8.2	31	32	9.0
12	11	29	22	e9.4	e7.2	13	18	6.0	20	39	24	8.7
13	13	26	21	13	e7.6	13	21	5.5	80	35	23	8.1
14	12	21	19	31	e8.4	13	27	5.9	60	36	20	7.7
15	11	19	17	21	e8.4	13	24	6.7	37	33	17	7.4
16 17 18 19 20	10 9.5 9.4 11 10	17 15 14 13 13	16 15 14 14 13	18 15 14 13 13	e8.6 e8.0 e7.2 e6.8 7.2	12 12 12 12 12 11	21 19 17 15 13	5.9 5.5 5.3 5.2 12	26 21 23 20 26	28 24 21 18 24	15 13 21 17 14	7.5 7.3 6.8 6.5 6.3
21	10	12	13	13	29	11	13	8.6	25	21	12	6.1
22	9.7	11	13	12	29	12	14	7.7	21	18	38	6.0
23	9.6	13	52	12	22	20	15	7.4	18	16	52	5.9
24	11	27	36	e11	20	18	14	6.9	15	14	34	5.6
25	9.9	31	28	11	17	17	15	6.5	13	13	27	5.6
26 27 28 29 30 31	9.6 9.8 9.9 10 10 9.7	26 22 20 18 17	23 20 18 17 16 15	11 10 9.2 8.8 9.8 8.8 8.8	15 14 16 	16 16 42 39 31 26	16 17 16 16 16	6.2 5.9 5.8 5.5 5.2 5.0	12 19 17 18 17	11 11 11 14 12 15	23 20 18 16 45 39	7.2 6.5 5.5 5.3 5.0
TOTAL	359.1	529.3	598	391.4	323.8	505	623	239.6	583.9	747	753	288.5
MEAN	11.6	17.6	19.3	12.6	11.6	16.3	20.8	7.73	19.5	24.1	24.3	9.62
MAX	19	31	52	31	29	42	35	15	80	75	55	28
MIN	9.4	9.5	13	8.8	6.8	11	13	5.0	5.7	11	10	5.0
CFSM	2.12	3.23	3.53	2.31	2.12	2.98	3.80	1.42	3.56	4.41	4.45	1.76
IN.	2.45	3.61	4.07	2.67	2.21	3.44	4.24	1.63	3.98	5.09	5.13	1.97
STATIST	ICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1926 - 2005	, <sup>@</sup> BY WAT	ER YEAR (	WY)			
MEAN	6.15	8.44	10.5	13.4	15.4	18.7	16.8	11.8	8.63	6.43	6.72	6.10
MAX	33.9	45.3	25.4	38.5	43.0	43.1	34.2	28.5	27.0	37.9	61.8	91.8
(WY)	(1930)	(1980)	(1933)	(1937)	(1990)	(1975)	(1936)	(1973)	(1949)	(1949)	(1940)	(2004)
MIN	0.65	1.23	1.58	1.99	4.46	5.25	5.21	4.68	1.82	1.18	0.83	0.51
(WY)	(1955)	(1955)	(1940)	(1940)	(1941)	(1988)	(1986)	(1948)	(1988)	(1998)	(1998)	(1954)

# 03450000 BEETREE CREEK NEAR SWANNANOA, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1926 - 2005 <sup>@</sup>
ANNUAL TOTAL	6,464.8	5,941.6	
ANNUAL MEAN	17.7	16.3	10.8
HIGHEST ANNUAL MEAN			17.8 1949
LOWEST ANNUAL MEAN			5.37 2002
HIGHEST DAILY MEAN	504 Sep 17	80 Jun 13	528 Aug 13, 1940
LOWEST DAILY MEAN	3.0 Jul 29	5.0 May 31	0.30 Sep 30, 1954
ANNUAL SEVEN-DAY MINIMUM	3.5 Jul 23	5.7 May 26	0.40 Sep 24, 1954
MAXIMUM PEAK FLOW		203 Aug 22	1,370* Aug 13, 1940
MAXIMUM PEAK STAGE		2.83 Aug 22	6.20 Aug 13, 1940
INSTANTANEOUS LOW FLOW		4.7 Sep 30	0.28* Jul 24, 1996
ANNUAL RUNOFF (CFSM)	3.24	2.98	1.97
ANNUAL RUNOFF (INCHES)	44.05	40.48	26.79
10 PERCENT EXCEEDS	25	28	22
50 PERCENT EXCEEDS	10	13	7.4
90 PERCENT EXCEEDS	5.2	7.0	1.6

<sup>@</sup> See PERIOD OF RECORD.
\* See REMARKS.
e Estimated.



#### 03451000 SWANNANOA RIVER AT BILTMORE, NC

LOCATION.--Lat 35°34'06", long 82°32'41", Buncombe County, Hydrologic Unit 06010105, on left bank at Biltmore, 100 ft downstream of Biltmore Avenue Bridge, 200 ft upstream from Southern Railway bridge, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--130 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to September 1926, May 1934 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1921(M), 1923(M), 1925(M). WSP 823: Drainage area. WSP 1306: 1921(M), 1924(M), 1926(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,976.58 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Dec. 1, 1920, to Sept. 30, 1926, nonrecording gage at site 100 ft upstream at same datum. Satellite and telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, and those above 6,500 ft<sup>3</sup>/s, which are poor. Considerable regulation from 1925-50 (reservoir silted) by Lake Craig, 3.6 mi upstream from station. City of Asheville diverted an average of 29.6 ft<sup>3</sup>/s from Burnett Lake (station 03448959) on North Fork Swannanoa River, 20 mi upstream from station. An average of 35.2 ft<sup>3</sup>/s was discharged downstrgam of station into the French Broad River as treated sewage effluent. Maximum discharge for period of record, from rating curve extended above 9,100 ft<sup>3</sup>/s on basis of computation of peak flow over dam 3.6 mi upstream from station. Minimum discharge for period of record occurred several days in Oct. 1941. Minimum discharge for current water year also occurred Sept. 30.

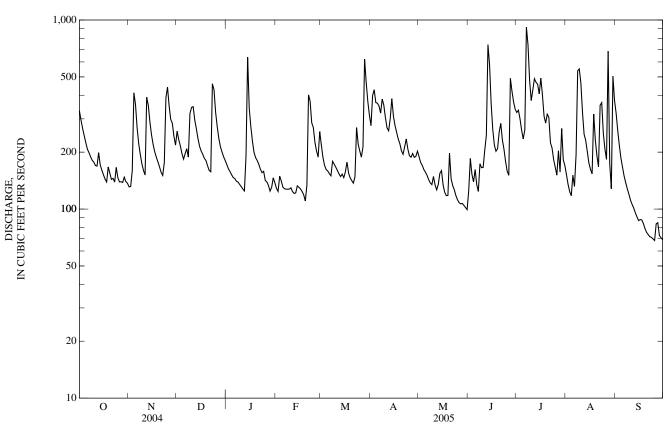
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed: 26 ft; discharge: 40,000 ft<sup>3</sup>/s in April 1791, from studies by Tennessee Valley Authority. Flood of July 1916 reached a stage of 20.7 ft; discharge, 23,000 ft<sup>3</sup>/s, from flood profile by Tennessee Valley Authority. Flood of Aug. 16, 1928 reached a stage of 18.74 ft, from floodmarks; discharge, 17,800 ft<sup>3</sup>/s. High stages are subject to backwater from French Broad River.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	331	131	258	172	129	218	276	189	126	324	152	321
2	295	131	233	163	124	188	399	176	185	333	135	260
3	267	160	216	158	149	170	428	170	153	300	124	217
4	245	412	197	152	141	162	366	162	139	262	118	186
5	224	358	184	147	131	159	363	157	162	235	151	166
6	207	270	196	145	128	154	351	151	135	262	132	149
7	198	222	209	140	127	150	322	143	124	915	194	138
8	189	195	188	139	127	179	381	138	174	738	539	128
9	181	174	320	135	127	173	355	135	166	479	551	120
10	177	160	344	131	130	167	304	149	166	375	463	111
11	170	151	348	128	124	160	269	134	205	427	325	106
12	169	390	296	125	121	154	259	126	245	489	249	101
13	199	354	266	192	122	149	301	135	740	469	231	95
14	171	290	236	635	133	153	384	155	580	457	202	91
15	161	247	215	342	130	147	310	160	361	407	175	87
16	152	220	203	272	128	157	276	134	263	492	162	88
17	144	201	195	229	124	177	254	123	218	401	153	88
18	139	188	186	199	119	155	235	118	202	311	318	84
19	167	178	180	187	110	146	222	118	209	285	233	79
20	155	167	169	181	134	141	203	198	255	317	192	75
21	143	157	160	172	402	137	195	145	284	305	167	73
22	145	151	157	162	372	148	213	133	232	225	354	71
23	139	176	460	156	286	270	235	126	207	210	365	71
24	166	388	429	158	e270	220	208	118	178	183	252	70
25	146	441	327	142	226	203	191	112	159	166	208	68
26 27 28 29 30 31	139 139 138 147 140 137	352 299 284 242 218	274 237 214 201 189 181	139 133 124 130 146 138	203 188 257 	188 214 621 469 371 314	188 197 188 190 202	108 107 107 104 102 99	151 491 420 369 337	151 203 157 267 182 170	183 683 173 128 505 375	83 85 72 70 69
TOTAL	5,520	7,307	7,468	5,572	4,762	6,414	8,265	4,232	7,636	10,497	8,192	3,422
MEAN	178	244	241	180	170	207	276	137	255	339	264	114
MAX	331	441	460	635	402	621	428	198	740	915	683	321
MIN	137	131	157	124	110	137	188	99	124	151	118	68
CFSM	1.37	1.87	1.85	1.38	1.31	1.59	2.12	1.05	1.96	2.60	2.03	0.88
IN.	1.58	2.09	2.14	1.59	1.36	1.84	2.37	1.21	2.19	3.00	2.34	0.98
STATIST	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1921 - 2005	BY WAT	ER YEAR (	WY)			
MEAN	97.4	118	139	190	224	272	248	186	137	104	102	98.6
MAX	569	604	385	610	598	740	560	480	387	503	828	1,162
(WY)	(1965)	(1980)	(1962)	(1995)	(1990)	(1975)	(1936)	(1973)	(1949)	(1949)	(1940)	(2004)
MIN	13.7	27.0	35.3	32.3	65.7	45.7	55.6	45.5	17.7	18.2	13.3	13.8
(WY)	(1955)	(1982)	(1989)	(1956)	(1988)	(1988)	(1986)	(1988)	(1988)	(1986)	(2002)	(1954)

# 03451000 SWANNANOA RIVER AT BILTMORE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1921 - 2005 <sup>@</sup>
ANNUAL TOTAL	85,116	79,287	
ANNUAL MEAN	233	217	159
HIGHEST ANNUAL MEAN			277 1949
LOWEST ANNUAL MEAN			55.9 1988
HIGHEST DAILY MEAN	10,200 Sep 8	915 Jul 7	10,200 Sep 8, 2004
LOWEST DAILY MEAN	42 Aug 10	68 Sep 25	1.2 Oct 14, 1941
ANNUAL SEVEN-DAY MINIMUM	50 Aug 5	72 Sep 19	6.4 Sep 7, 2002
MAXIMUM PEAK FLOW	c	1,950 Aug 22	18,400* Aug 13, 1940
MAXIMUM PEAK STAGE		6.25 Aug 22	19.22 Sep 8, 2004
INSTANTANEOUS LOW FLOW		66* Sep 25	1.1* Oct 9, 1941
ANNUAL RUNOFF (CFSM)	1.79	1.67	1.23
ANNUAL RUNOFF (INCHÉS)	24.36	22.69	16.65
10 PERCENT EXCEEDS	351	371	309
50 PERCENT EXCEEDS	130	181	106
90 PERCENT EXCEEDS	75	122	37

<sup>@</sup> See PERIOD OF RECORD.
\* See REMARKS.
e Estimated.



#### 982

#### TENNESSEE RIVER BASIN

#### 03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'32", long 82°34'41", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi downstream of bridge on U.S. Highways 19 and 23, 3.2 mi downstream of Swannanoa River, and at mile 145.8.

DRAINAGE AREA .-- 945 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M).

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft above NGVD of 1929. Sept. 17, 1895, to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi upstream at datum 1961.80 ft. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum. Satellite and telephone telemetry at station.

REMARKS .-- Records good except those for estimated daily discharges, which are poor. Many small diversions from tributaries upstream from station for water supply, Diversions by City of Asheville and others from upstream tributaries in the Swannanoa River basin (station 03451000) totaled about 29.6 ft<sup>3</sup>/s and 35.2 ft<sup>3</sup>/s was discharged 4 mi downstream from station as treated effluent. Slight diurnal fluctuation and occasional slight regulation at low flow caused by power plant 46 mi upstream and small reservoirs upstream from station. Maximum discharge for period of record, from rating curve extended above 43,000 ft<sup>3</sup>/s, by logarithmic plotting; maximum gage height, 23,10, from floodmarks. Minimum discharge for period of record also occurred Sept. 14, 2002. Minimum discharge for current water year also occurred Sept. 30.

EXTREMES OUTSIDE PERIOD OF RECORD .-- Maximum stage observed since at least 1791, that of July 16, 1916, and flood of June 17, 1876, reached a stage of 18 ft, from studies by Tennessee Valley Authority.

					Dim		THECED					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,020	1,810	3,130	2,530	2,090	2,890	3,350	2,270	1,500	3,640	3,110	3,990
2	4,730	1,770	3,400	2,440	1,950	2,380	3,550	2,040	3,060	3,580	2,790	2,910
3	4,030	2,120	2,930	2,370	2,200	2,130	3,830	1,900	4,090	3,280	2,510	2,530
4	3,690	4,100	2,710	2,310	2,520	2,030	3,300	1,830	3,040	3,100	2,350	2,270
5	3,420	5,540	2,540	2,270	2,260	1,990	3,010	1,790	2,570	3,500	2,330	2,120
6	3,190	3,960	2,470	2,230	2,090	1,960	2,820	1,790	2,270	3,000	2,330	1,980
7	3,040	2,880	2,870	2,180	1,990	1,900	2,710	1,750	2,570	7,390	2,670	1,870
8	2,890	2,560	3,060	2,150	1,940	2,100	3,090	1,720	2,450	9,870	4,450	1,800
9	2,790	2,330	3,510	2,190	1,920	2,210	3,390	1,690	2,940	8,020	4,030	1,750
10	2,720	2,170	5,750	2,080	1,910	2,020	2,940	1,770	2,470	4,920	3,470	1,670
11	2,650	2,090	5,170	2,020	1,830	1,910	2,700	1,850	2,760	4,650	3,130	1,590
12	2,550	3,140	3,860	1,970	1,780	1,850	2,600	1,780	3,210	7,960	2,740	1,540
13	2,690	4,600	3,310	2,030	1,760	1,790	3,140	1,670	7,750	7,970	2,610	1,510
14	2,580	3,480	2,980	5,590	1,810	1,900	3,660	1,690	7,860	7,650	2,710	1,460
15	2,420	2,850	2,760	4,960	1,920	1,890	3,250	1,750	7,240	7,420	2,380	1,420
16	2,320	2,610	2,630	3,370	1,830	1,840	2,880	1,850	6,500	6,140	2,260	1,410
17	2,190	2,460	2,530	2,870	1,750	2,100	2,660	1,710	3,870	4,840	2,430	1,540
18	2,130	2,330	2,460	2,600	1,690	2,030	2,530	1,580	3,050	4,770	3,550	1,490
19	2,190	2,230	2,390	2,450	1,630	1,860	2,430	1,550	3,000	4,250	4,100	1,350
20	2,280	2,140	2,270	2,370	1,680	1,800	2,320	2,450	3,260	4,670	2,990	1,290
21	2,170	2,090	2,180	2,310	2,540	1,750	2,230	2,500	3,420	4,860	2,870	1,270
22	2,060	2,020	2,160	2,230	3,120	1,740	2,330	2,100	2,930	4,220	2,920	1,250
23	2,040	2,180	4,570	2,130	2,550	2,800	2,650	1,830	2,630	3,900	3,340	1,230
24	2,140	3,110	6,580	1,970	2,360	3,000	2,460	1,690	2,360	3,440	3,180	1,210
25	2,080	4,900	6,270	2,010	2,320	2,450	2,210	1,580	2,180	3,100	2,590	1,180
26 27 28 29 30 31	1,970 1,920 1,890 1,960 2,030 1,920	4,000 3,170 3,140 2,950 2,660	4,430 3,360 3,030 2,850 2,730 2,640	1,980 1,930 1,860 1,840 2,140 2,400	2,120 1,990 2,370  	2,200 2,190 6,530 7,340 5,850 3,720	2,110 2,140 2,060 2,010 2,050	$1,510 \\ 1,470 \\ 1,460 \\ 1,450 \\ 1,430 \\ 1,420$	2,100 6,540 9,000 6,270 4,340	2,860 2,890 3,010 3,510 3,530 3,320	2,290 2,650 2,110 1,980 4,140 5,460	1,230 1,310 1,240 1,190 1,190
TOTAL	83,700	87,390	$103,530 \\ 3,340 \\ 6,580 \\ 2,160 \\ 3.53 \\ 4.08$	75,780	57,920	80,150	82,410	54,870	117,230	149,260	92,470	49,790
MEAN	2,700	2,913		2,445	2,069	2,585	2,747	1,770	3,908	4,815	2,983	1,660
MAX	7,020	5,540		5,590	3,120	7,340	3,830	2,500	9,000	9,870	5,460	3,990
MIN	1,890	1,770		1,840	1,630	1,740	2,010	1,420	1,500	2,860	1,980	1,180
CFSM	2.86	3.08		2.59	2.19	2.74	2.91	1.87	4.14	5.10	3.16	1.76
IN.	3.29	3.44		2.98	2.28	3.16	3.24	2.16	4.61	5.88	3.64	1.96
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1896 - 2005	, BY WATE	R YEAR (W	Y)			
MEAN	1,580	1,639	2,103	2,412	2,658	2,992	2,741	2,186	1,893	$1,723 \\11,500 \\(1916) \\559 \\(1986)$	1,688	1,536
MAX	7,025	5,121	5,700	6,068	6,364	7,928	5,705	4,961	5,774		8,362	10,210
(WY)	(1965)	(1980)	(1915)	(1937)	(1998)	(1899)	(1899)	(1973)	(1909)		(1901)	(2004)
MIN	353	507	636	548	1,083	1,037	973	852	547		328	346
(WY)	(1955)	(1932)	(1956)	(1956)	(1931)	(1988)	(1986)	(2001)	(1988)		(1925)	(1954)

# 03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1896 - 2005
ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW ANNUAL RUNOFF (CFSM) ANNUAL RUNOFF (INCHES) 10 PERCENT EXCEEDS 50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	1,055,332 2,883 34,700 Sep 8 894 Aug 23 986 Aug 17 3.05 41.54 4,100 2,040 1,310	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{ccccc} 2,093 \\ 3,671 & 1901 \\ 1,004 & 1988 \\ 66,000 & Jul 16, 1916 \\ 215 & Sep 13, 2002 \\ 246 & Sep 7, 2002 \\ 110,000^* & Jul 16, 1916 \\ 23.10^* & Jul 16, 1916 \\ 215^* & Sep 13, 2002 \\ 2.22 \\ 30.10 \\ 3,640 \\ 1,640 \\ 771 \end{array}$
* See REMARKS.			
DISCHARGE, 5,000 5,000 2,000 2,000 - 0 0 0 0			
1,000 O N 2004	D J F M	A M J 2005	J A S

### 03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC-Continued

### PRECIPITATION RECORDS

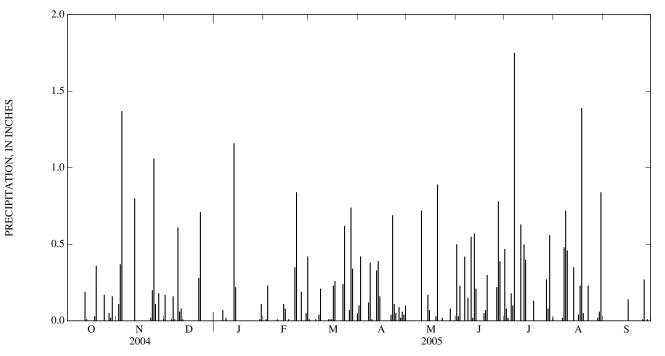
#### PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Tipping-bucket raingage and electronic datalogger. Satellite telemetry at station.

REMARKS.--Gage is operated in cooperation with Tennessee Valley Authority. Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

### PRECIPITATION, TOTAL, INCHES WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2 3 4 5	$0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$	$0.00 \\ 0.11 \\ 0.37 \\ 1.37 \\ 0.00$	$\begin{array}{c} 0.17 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.01 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00 \\ 0.01 \\ 0.23 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.01 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.01 \end{array}$	$\begin{array}{c} 0.10 \\ 0.42 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.50 \\ 0.03 \\ 0.23 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.47 \\ 0.08 \\ 0.02 \\ 0.00 \\ 0.18 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$
6 7 8 9 10	$0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$0.16 \\ 0.01 \\ 0.00 \\ 0.61 \\ 0.06$	0.07 0.00 0.02 0.00 0.00	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.01\\ 0.00\end{array}$	$\begin{array}{c} 0.00 \\ 0.04 \\ 0.21 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.12 \\ 0.38 \\ 0.01 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.72 \end{array}$	$\begin{array}{c} 0.42 \\ 0.00 \\ 0.15 \\ 0.00 \\ 0.55 \end{array}$	$\begin{array}{c} 0.10 \\ 1.75 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.02 \\ 0.48 \\ 0.72 \\ 0.46 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$
11 12 13 14 15	$0.00 \\ 0.19 \\ 0.01 \\ 0.00 \\ 0.00$	$\begin{array}{c} 0.00\\ 0.80\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.08 \\ 0.01 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 1.16 \\ 0.22 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.11 \\ 0.08 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.01 \\ 0.01 \\ 0.01 \end{array}$	$\begin{array}{c} 0.00 \\ 0.33 \\ 0.39 \\ 0.16 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.17 \\ 0.07 \end{array}$	$\begin{array}{c} 0.02 \\ 0.57 \\ 0.21 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.63 \\ 0.00 \\ 0.50 \\ 0.40 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.35 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$
16 17 18 19 20	$0.00 \\ 0.00 \\ 0.03 \\ 0.36 \\ 0.00$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.01 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.35 \end{array}$	$\begin{array}{c} 0.23 \\ 0.26 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$0.00 \\ 0.00 \\ 0.00 \\ 0.03 \\ 0.89$	$0.00 \\ 0.00 \\ 0.05 \\ 0.07 \\ 0.30$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.13 \\ 0.00 \end{array}$	0.04 0.23 1.39 0.05 0.00	$\begin{array}{c} 0.14 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$
21 22 23 24 25	$0.00 \\ 0.00 \\ 0.00 \\ 0.17 \\ 0.00$	$0.00 \\ 0.02 \\ 0.20 \\ 1.06 \\ 0.11$	$\begin{array}{c} 0.00\\ 0.28\\ 0.71\\ 0.00\\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$0.84 \\ 0.00 \\ 0.00 \\ 0.19 \\ 0.00$	$\begin{array}{c} 0.00 \\ 0.24 \\ 0.62 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.04 \\ 0.69 \\ 0.11 \\ 0.05 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.02 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.23 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.01 \end{array}$
26 27 28 29 30 31	$\begin{array}{c} 0.00 \\ 0.05 \\ 0.02 \\ 0.16 \\ 0.00 \\ 0.00 \end{array}$	0.00 0.18 0.00 0.00 0.01	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.01 \\ 0.11 \\ 0.00 \end{array}$	0.00 0.05 0.42	0.07 0.74 0.34 0.00 0.00 0.05	0.09 0.02 0.06 0.04 0.10	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.08 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	0.22 0.78 0.39 0.00 0.00	$\begin{array}{c} 0.00 \\ 0.27 \\ 0.08 \\ 0.56 \\ 0.00 \\ 0.02 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.02 \\ 0.06 \\ 0.84 \\ 0.00 \end{array}$	0.27 0.00 0.01 0.00 0.00
TOTAL	0.99	4.23	2.10	1.59	2.30	2.85	3.11	1.98	4.49	5.19	4.89	0.43



### 03451690 NEWFOUND CREEK NEAR ALEXANDER, NC

LOCATION.--Lat 35°39'59", long 82°38'04", Buncombe County, Hydrologic Unit 06010105, on left bank 21 ft downstream from bridge on Secondary Road 1641, 0.9 mi above mouth, and 2.6 mi southwest of Alexander.

DRAINAGE AREA.--34.2 mi<sup>2</sup>.

PERIOD OF RECORD .-- December 2000 to October 2005 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,910 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

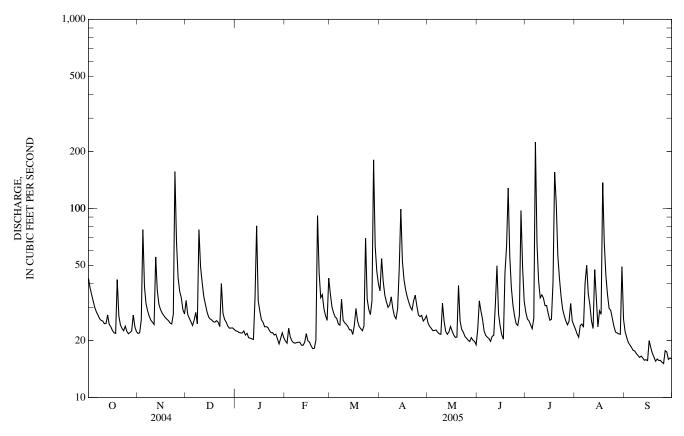
REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Maximum gage height for period of record from high-water marks at gage. Minimum discharge for the current water also occurred several days in Sept.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2 3 4 5	43 38 35 32 30	22 22 26 77 38	33 27 26 25 24	23 22 22 22 22 22	20 19 23 21 20	35 30 28 27 26	37 54 41 35 32	25 24 23 23 23	23 32 29 26 22	28 26 25 24 23	23 22 21 24 24	22 21 20 19 18
6 7 8 9 10	28 27 26 26 25	31 29 27 26 25	26 28 25 77 49	22 21 22 21 21 21	20 19 20 20 20	24 24 33 26 25	30 31 34 30 27	23 22 22 22 22 32	21 21 20 20 21	26 224 65 41 34	24 40 e50 35 31	18 18 17 17 16
11 12 13 14 15	25 25 27 24 24	24 55 37 31 29	41 34 31 28 27	20 20 34 81 32	19 19 20 22 20	24 24 23 23 22	26 29 48 99 52	25 22 22 22 22 24	21 31 50 28 24	35 34 31 31 28	25 23 47 34 24	17 16 16 16 16
16 17 18 19 20	23 22 22 42 27	28 27 26 26 25	26 26 25 25 25	29 26 e25 24 24	20 19 18 18 20	24 30 25 24 23	42 37 34 32 30	22 21 21 21 39	21 20 46 63 128	26 26 41 156 106	29 28 e137 e65 44	e20 18 17 16 16
21 22 23 24 25	24 23 23 24 22	25 24 28 157 66	e25 24 40 28 26	23 23 e22 e22 21	92 46 34 35 30	23 24 69 33 29	29 32 35 30 27	25 23 22 21 21	56 38 31 27 25	56 43 34 29 27	35 30 29 26 24	16 16 15 15
26 27 28 29 30 31	22 22 22 27 24 22	43 36 34 29 28	25 24 23 23 23 23 23	22 20 19 21 22 21	27 26 43 	27 33 181 63 47 40	27 27 25 26 27	20 20 21 20 20 19	24 27 98 49 32	25 24 25 31 25 24	22 22 22 22 22 49 26	18 17 16 16 16
TOTAL MEAN MAX MIN CFSM IN.	826 26.6 43 22 0.78 0.90	1,101 36.7 157 22 1.07 1.20	912 29.4 77 23 0.86 0.99	769 24.8 81 19 0.73 0.84	730 26.1 92 18 0.76 0.79	1,089 35.1 181 22 1.03 1.18	1,065 35.5 99 25 1.04 1.16	710 22.9 39 19 0.67 0.77	$1,074 \\ 35.8 \\ 128 \\ 20 \\ 1.05 \\ 1.17$	1,373 44.3 224 23 1.30 1.49	1,057 34.1 137 21 1.00 1.15	515 17.2 22 15 0.50 0.56
STATIST	ICS OF MO	ONTHLY MI	EAN DATA	FOR WAT	ER YEARS	2001 - 2005,	BY WATE	R YEAR (W	/Y)			
MEAN MAX (WY) MIN (WY)	13.3 26.6 (2005) $6.49 (2002)$	20.1 36.7 (2005) 6.39 (2002)	18.9 29.4 (2005) 8.60 (2002)	17.4 24.8 (2005) 14.8 (2001)	22.8 32.4 (2004) 9.30 (2002)	24.9 35.1 (2005) 15.7 (2002)	26.1 40.7 (2003) 12.0 (2002)	25.7 66.6 (2003) 8.46 (2001)	19.6 35.8 (2005) 7.87 (2001)	20.1 44.3 (2005) 6.89 (2001)	18.0 34.1 (2005) 3.38 (2002)	40.8 157 (2004) 6.44 (2002)

# 03451690 NEWFOUND CREEK NEAR ALEXANDER, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WAT	TER YEAR	WATER YEARS	2001 - 2005
ANNUAL TOTAL	12,826		11,221			
ANNUAL MEAN	35.0		30.7		24.7	
HIGHEST ANNUAL MEAN					32.1	2004
LOWEST ANNUAL MEAN					9.50	2002
HIGHEST DAILY MEAN	2,690	Sep 17	224	Jul 7	2,690	Sep 17, 2004
LOWEST DAILY MEAN	11	Aug 28	15	Sep 24	1.8	Aug 14, 2002
ANNUAL SEVEN-DAY MINIMUM	12	Aug 26	16	Sep 19	2.1	Aug 8, 2002
MAXIMUM PEAK FLOW		•	658	Jul 19	17,000*	Sep 17, 2004
MAXIMUM PEAK STAGE			5.51	Jul 19	20.60*	Sep 17, 2004
INSTANTANEOUS LOW FLOW			14*	Sep 10	1.2	Aug 23, 2002
ANNUAL RUNOFF (CFSM)	1.02		0.899	-	0.722	•
ANNUAL RUNOFF (INCHÉS)	13.95		12.21		9.81	
10 PERCENT EXCEEDS	42		43		35	
50 PERCENT EXCEEDS	21		25		18	
90 PERCENT EXCEEDS	14		20		6.4	

\* See REMARKS. e Estimated.



# 03451690 NEWFOUND CREEK NEAR ALEXANDER, NC-Continued

### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
$1 \\ 2$	15 15											
3 4	15 14											
5	14											
6 7	24 20											
8	20											
9	17											
10	16											
11	16											
12	15											
13 14	15 15											
14	15											
16	14											
17	14											
18 19	14 e14											
20	14											
21	14											
22	14											
23	14											
24 25	14 14											
25	14											
26	14											
27	14											
28	e14											
29 30	e14 e14											
31	e14											
TOTAL	470											
MEAN	15.2											
MAX MIN	24 14											
CFSM	0.44											
IN.	0.44											
	0.01											

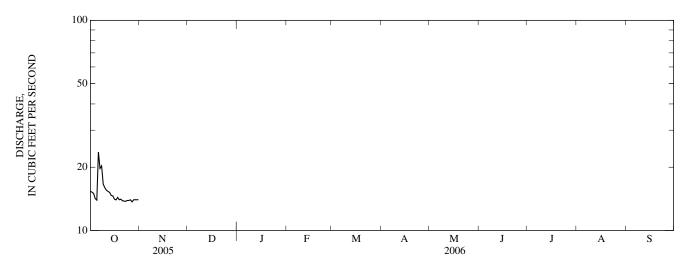
### SUMMARY STATISTICS

MAXIMUM PEAK FLOW
MAXIMUM PEAK STAGE
INSTANTANEOUS LOW FLOW

# FOR 2006 WATER YEAR

Oct 6
Oct 6
Oct 15

e Estimated.



### 03453000 IVY RIVER NEAR MARSHALL, NC

LOCATION.--Lat 35°46'11", long 82°37'15", Madison County, Hydrologic Unit 06010105, on right bank 0.2 mi downstream from bridge on U.S. Highway 25-70, 1.9 mi upstream from mouth, and 4.0 mi southeast of Marshall.

DRAINAGE AREA.--158 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1933 to September 1973. July 1, 1994 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,700.41 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite telemetry at station.

REVISED RECORDS.--WSP 803: 1934(M), 1935. WSP 1910: 1936(P), 1937(M), 1940(M), 1946(M), 1957(P). WDR NC-04-1: 1994-2003(M).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable low flow regulation, at times, caused by small power plant at Ivy Dam, 0.4 mi upstream. Minimum discharge for period of record and current water year affected by regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June, 1876, reached a stage of 16.0 ft, from studies by Tennessee Valley Authority (discharge 14,000 ft<sup>3</sup>/s). An outstanding but lesser flood occurred in July, 1916 (stage and discharge unknown).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	74	216	141	117	257	278	232	112	152	230	137
2	121	71	185	134	111	222	631	213	132	143	169	115
3	112	75	170	129	134	207	887	200	116	149	183	97
4	103	225	157	125	134	193	652	184	116	131	159	87
5	92	206	145	122	126	187	523	173	102	116	115	82
6	86	146	156	124	122	173	421	166	115	111	123	73
7	82	122	190	121	120	165	356	157	112	292	135	72
8	76	108	164	118	120	274	345	150	246	325	185	65
9	75	96	349	111	122	238	313	141	163	205	194	65
10	72	89	418	107	125	225	267	166	177	163	169	61
11	69	84	441	105	116	214	242	173	151	163	126	58
12	68	263	386	102	111	201	226	143	138	185	107	56
13	96	267	318	122	116	185	288	134	283	176	92	54
14	79	196	263	1,200	156	184	518	134	209	210	101	52
15	74	163	223	499	148	166	409	186	156	220	87	53
16	68	142	197	357	142	173	343	168	133	184	85	56
10 17 18 19 20	64 63 93 100	142 128 115 108 101	197 180 166 160 e147	277 219 199 185	138 127 121 130	197 197 183 175 169	296 262 236 216	145 136 129 252	133 119 113 144 178	216 181 197 310	80 146 168 105	50 76 60 47 49
	78	94	e143	173	781	162	203	197	197	226	89	46
21 22 23 24	74 69 74	89 103 585	141 379 334	159 e149 e144	660 429 356	160 443 384	333 384 327	169 163 149	145 128 115	169 151 127	78 154 132	47 43 44
24 25	72	520	262	e144 139	299	326	289	139	112	114	109	43
26 27 28 29 30 31	67 69 78 84 93 79	e455 e385 e320 e250 178	226 197 176 166 158 149	133 123 112 114 126 121	251 222 246 	280 249 412 405 356 313	268 262 236 251 251	130 123 118 115 110 104	97 167 150 186 197	103 96 115 127 128 167	91 83 82 75 184 208	48 60 49 46 47
TOTAL	2,568	5,758	6,962	5,990	5,780	7,478	10,513	4,899	4,509	5,352	4,044	1,888
MEAN	82.8	192	225	193	206	241	350	158	150	173	130	62.9
MAX	138	585	441	1,200	781	443	887	252	283	325	230	137
MIN	63	71	141	102	111	160	203	104	97	96	75	43
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1934 - 2005	, <sup>@</sup> BY WAT	ER YEAR (	WY)			
MEAN	75.3	94.9	134	209	260	304	244	159	112	99.5	87.3	68.7
MAX	367	229	407	636	563	848	574	404	272	280	444	486
(WY)	(1965)	(1950)	(1962)	(1937)	(1957)	(1963)	(1936)	(2003)	(1950)	(1949)	(1940)	(2004)
MIN	19.3	28.9	39.8	46.4	60.9	129	76.1	58.6	43.3	29.8	22.8	20.5
(WY)	(1953)	(1940)	(1940)	(1940)	(1941)	(1970)	(1942)	(1941)	(1953)	(1952)	(1956)	(1998)

# 03453000 IVY RIVER NEAR MARSHALL, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1934 - 2005 <sup>@</sup>
ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW 10 PERCENT EXCEEDS 50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	64,920 177 4,430 Sep 17 42 Jul 22 46 Aug 17 280 123 64	65,741 180 1,200 Jan 14 43 Sep 23 46 Sep 19 2,470 Jan 14 7.84 Jan 14 1.8* Oct 9 325 147 74	153       232       1936         92.1       1941         8,010       Mar 12, 1963         8.5       Sep 2, 1953         9.8       Aug 28, 1953         14,400       Mar 26, 1965         17.21       Jan 14, 1995         1.8*       Oct 9, 2004         300       97         35
<ul> <li><sup>@</sup> See PERIOD OF RECORD.</li> <li>* See REMARKS.</li> <li>e Estimated.</li> </ul>			
10,000 5,000 2,000 1,000 500 200 100 500 200 100 500 0 0 0 0 0 0 0 0 0 0 0 0			
O N 2004	D J F M	A M J 2005	J A S

#### 03453500 FRENCH BROAD RIVER AT MARSHALL, NC

LOCATION.--Lat 35°47'11", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi upstream from Hayes Creek, 1.0 mi downstream of Ivy River, 1.5 mi southeast of Marshall, and at mile 126.7.

DRAINAGE AREA.--1,332 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS .-- WSP 1436: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 1,646.79 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite and telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs upstream from station. Prior to July 1963, some regulation by Weaver plant of Carolina Power and Light Company 15 mi upstream, after November 1986 the same power plant was operated by the Metropolitan Sewage Treatment Plant. Minimum discharge for period of record also occurred Sept. 14, 1954.

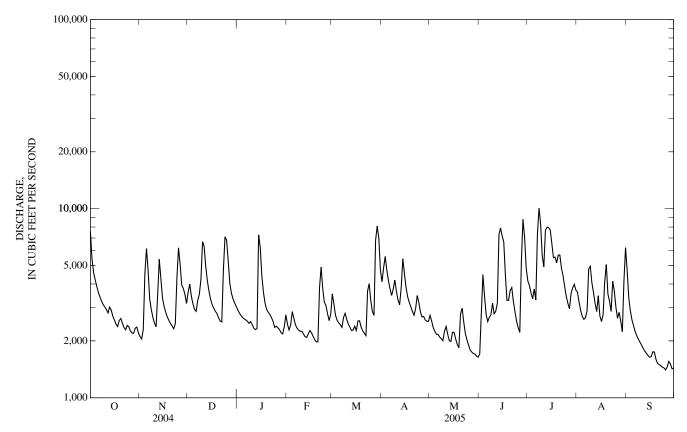
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791: 22.0 ft, July 16, 1916; discharge: 115,000 ft<sup>3</sup>/s. Flood of Aug. 30, 1940, reached a stage of 16.6 ft; discharge, 70,000 ft<sup>3</sup>/s, from high water marks, flood profiles, and studies by Tennessee Valley Authority.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,570	2,110	3,610	2,910	2,450	3,550	4,100	2,730	1,710	4,160	3,620	4,750
2	5,420	2,050	4,000	2,810	2,280	3,130	4,870	2,540	2,810	3,930	3,210	3,390
3	4,600	2,300	3,450	2,720	2,430	2,730	5,590	2,350	4,480	3,590	2,890	2,890
4	4,210	4,530	3,140	2,660	2,860	2,570	4,730	2,240	3,450	3,340	2,700	2,580
5	3,880	6,160	2,930	2,620	2,630	2,490	4,170	2,170	2,750	3,770	2,600	2,410
6	3,600	4,740	2,860	2,580	2,430	2,430	3,770	2,160	2,530	3,290	2,660	2,240
7	3,410	3,330	3,280	2,540	2,330	2,360	3,480	2,100	2,670	7,280	2,890	2,130
8	3,240	2,940	3,530	2,480	2,280	2,660	3,750	2,050	2,750	10,100	4,800	2,040
9	3,110	2,660	4,230	2,530	2,250	2,800	4,200	2,000	3,160	8,330	4,960	1,970
10	3,020	2,480	6,700	2,440	2,250	2,590	3,650	2,250	2,780	5,650	4,060	1,900
11	2,930	2,370	6,300	2,330	2,170	2,450	3,290	2,380	2,870	4,930	3,610	1,830
12	2,810	3,540	4,940	2,290	2,100	2,360	3,100	2,170	3,170	7,680	3,160	1,770
13	3,020	5,400	4,160	2,320	2,090	2,270	3,850	2,000	7,310	7,980	2,860	1,720
14	2,910	4,250	3,670	7,270	2,180	2,280	5,440	1,990	7,910	7,940	3,470	1,680
15	2,700	3,380	3,320	6,270	2,270	2,390	4,540	2,220	7,190	7,720	2,710	1,640
16	2,580	3,040	3,110	4,410	2,210	2,270	3,840	2,220	6,670	6,550	2,530	1,650
17	2,450	2,830	2,980	3,620	2,110	2,550	3,430	2,040	4,460	5,510	2,750	1,750
18	2,380	2,680	2,870	3,170	2,030	2,550	3,200	1,910	3,270	5,550	4,120	1,750
19	2,560	2,560	2,790	2,940	1,970	2,360	3,030	1,840	3,280	5,170	5,070	1,600
20	2,620	2,470	2,650	2,830	1,980	2,260	2,860	2,770	3,690	5,680	3,540	1,520
21	2,480	2,400	2,550	2,760	3,810	2,190	2,740	2,980	3,830	5,690	3,240	1,500
22	2,350	2,320	2,520	2,660	4,920	2,130	2,970	2,520	3,230	4,850	2,860	1,480
23	2,290	2,460	4,730	2,540	3,800	3,670	3,470	2,190	2,850	4,420	4,130	1,450
24	2,420	4,320	7,110	2,360	3,210	4,020	3,190	2,030	2,540	3,880	3,670	1,440
25	2,370	6,210	6,820	2,390	3,080	3,260	2,840	1,900	2,350	3,450	3,010	1,400
26 27 28 29 30 31	2,250 2,200 2,190 2,340 2,370 2,200	5,090 3,950 3,790 3,520 3,150	5,340 4,050 3,580 3,330 3,180 3,040	2,340 2,300 2,210 2,180 2,370 2,750	2,790 2,560 2,770 	2,860 2,720 6,800 8,090 7,000 4,750	2,680 2,690 2,580 2,540 2,540	1,790 1,750 1,720 1,700 1,660 1,640	2,220 5,300 8,800 7,050 4,850	3,160 2,960 3,560 3,820 3,980 3,720	2,640 2,830 2,550 2,240 4,140 6,220	1,460 1,560 1,510 1,430 1,430
TOTAL	94,480	103,030	120,770	90,600	72,240	98,540	107,130	66,010	121,930	161,640	105,740	57,870
MEAN	3,048	3,434	3,896	2,923	2,580	3,179	3,571	2,129	4,064	5,214	3,411	1,929
MAX	7,570	6,210	7,110	7,270	4,920	8,090	5,590	2,980	8,800	10,100	6,220	4,750
MIN	2,190	2,050	2,520	2,180	1,970	2,130	2,540	1,640	1,710	2,960	2,240	1,400
CFSM	2.29	2.58	2.92	2.19	1.94	2.39	2.68	1.60	3.05	3.91	2.56	1.45
IN.	2.64	2.88	3.37	2.53	2.02	2.75	2.99	1.84	3.41	4.51	2.95	1.62
STATIST	ICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1943 - 2005	, BY WATE	R YEAR (W	VY)			
MEAN	1,762	2,032	2,435	2,873	3,301	3,695	3,381	2,664	2,201	1,818	1,780	1,681
MAX	8,172	5,640	5,465	6,279	7,373	7,170	6,149	5,585	4,191	5,214	4,905	10,430
(WY)	(1965)	(1980)	(1962)	(1998)	(1998)	(1975)	(1983)	(2003)	(1989)	(2005)	(1994)	(2004)
MIN	450	651	778	715	1,547	1,235	1,191	1,066	700	708	577	384
(WY)	(1955)	(1955)	(1956)	(1956)	(2002)	(1988)	(1986)	(1988)	(1988)	(1986)	(2002)	(1954)

# 03453500 FRENCH BROAD RIVER AT MARSHALL, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEAR	S 1943 - 2005
ANNUAL TOTAL	1,166,330		1,199,980			
ANNUAL MEAN	3,187		3,288		2,464	
HIGHEST ANNUAL MEAN					3,573	1949
LOWEST ANNUAL MEAN					1,229	1988
HIGHEST DAILY MEAN	32,400	Sep 8	10,100	Jul 8	32,400	Sep 8, 2004
LOWEST DAILY MEAN	1,200	Aug 23	1,400	Sep 25	292	Sep 27, 1954
ANNUAL SEVEN-DAY MINIMUM	1,310	Aug 17	1,460	Sep 24	313	Sep 24, 1954
MAXIMUM PEAK FLOW		-	12,900	Jul 7	54,000	Nov 6, 1977
MAXIMUM PEAK STAGE			5.92	Jul 7	13.64	Nov 6, 1977
INSTANTANEOUS LOW FLOW			1,210	Sep 18	193*	Sep 13, 1954
ANNUAL RUNOFF (CFSM)	2.39		2.47	1	1.85	<b>1</b> ·
ANNUAL RUNOFF (INCHÉS)	32.57		33.51		25.13	
10 PERCENT EXCEEDS	4,740		5,360		4,390	
50 PERCENT EXCEEDS	2,280		2,830		1,970	
90 PERCENT EXCEEDS	1,570		2,000		898	

\* See REMARKS.



### 03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, NC

LOCATION.--Lat 35°23'46", long 82°56'15", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on Secondary Road 1216, 600 ft upstream from Big Creek, 1.1 mi upstream from Lake Logan, 6.7 mi southeast of Hazelwood, and at mile 9.3.

DRAINAGE AREA .-- 27.6 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1954 to current year.

REVISED RECORDS .-- WDR NC-04-1: 1994(M).

GAGE.--Water-stage recorder. Datum of gage is 2,976.00 ft above NGVD of 1929. Satellite and telephone telemetry at station.

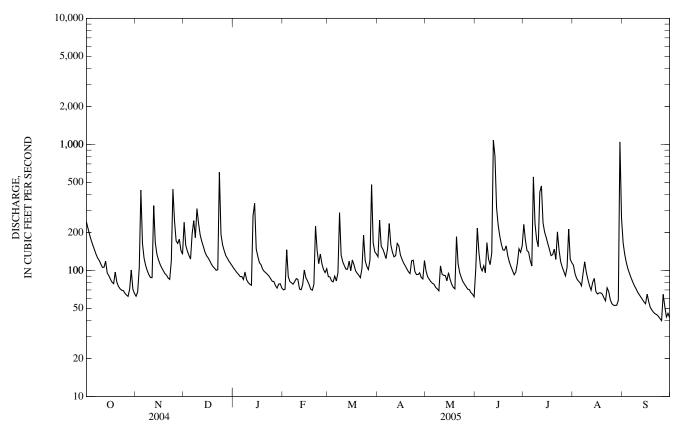
REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum gage height for period of record from high-water mark. Maximum discharge for period of record from rating curve extended above 7,500 ft<sup>3</sup>/s on basis of slope area measurement of peak flow. Minimum discharge for period of record also occurred Sept. 30, 1954. Minimum discharge for current water year also occurred Sept. 25, 26, 30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	62	241	104	70	89	128	99	101	232	110	165
2	215	68	158	100	71	89	251	89	217	174	94	134
3	192	105	143	96	146	83	156	85	138	144	86	115
4	174	433	132	93	89	81	148	81	107	140	83	103
5	159	163	123	89	82	90	136	79	99	120	80	94
6	146	125	196	89	80	82	124	78	109	108	75	87
7	135	109	248	85	78	96	150	73	96	552	95	81
8	125	99	182	97	81	287	236	71	166	235	117	76
9	120	92	309	84	86	132	160	69	123	176	97	72
10	112	88	237	80	85	117	139	109	111	154	85	67
11	106	88	192	78	71	109	128	93	138	418	76	64
12	106	327	170	76	70	102	131	91	1,080	468	70	62
13	118	166	155	270	77	102	164	91	806	239	80	59
14	96	135	140	341	101	119	157	83	315	201	86	56
15	91	121	131	148	87	99	133	96	229	182	68	54
16 17 18 19 20	85 81 79 97 81	112 105 99 94 92	126 119 112 107 e104	129 e115 e111 102 98	83 77 71 70 77	121 111 99 95 92	122 114 109 103 98	85 78 73 71 185	187 161 145 145 157	163 147 131 133 147	65 66 65 61	65 56 51 48 47
21	75	87	100	96	225	87	94	113	131	122	57	45
22	72	85	101	93	145	104	119	96	116	202	73	45
23	70	119	601	e90	113	190	121	88	107	145	68	43
24	69	440	193	e86	135	120	98	81	99	117	58	42
25	66	246	160	82	113	108	93	78	92	106	54	40
26 27 28 29 30 31	64 62 71 101 71 66	172 164 177 144 134	144 131 125 118 113 109	81 76 72 78 78 78 72	102 96 103  	101 121 479 165 140 135	93 96 88 86 120	74 71 70 67 65 62	97 114 149 139 157	98 91 106 213 122 115	53 53 53 58 1,050 259	65 52 43 46 42
TOTAL	3,348	${}^{4,451}_{148}_{440}_{62}_{5.38}_{5.00}$	5,220	3,289	2,684	3,945	3,895	2,644	5,831	5,701	3,461	2,019
MEAN	108		168	106	95.9	127	130	85.3	194	184	112	67.3
MAX	243		601	341	225	479	251	185	1,080	552	1,050	165
MIN	62		100	72	70	81	86	62	92	91	53	40
CFSM	3.91		6.10	3.84	3.47	4.61	4.70	3.09	7.04	6.66	4.05	2.44
IN.	4.51		7.04	4.43	3.62	5.32	5.25	3.56	7.86	7.68	4.66	2.72
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1954 - 2005	BY WATE	R YEAR (W	YY)			
MEAN	71.8	90.9	110	125	151	162	140	108	83.6	61.1	58.5	66.9
MAX	229	301	234	272	355	312	291	289	213	207	187	575
(WY)	(1965)	(1980)	(1962)	(1998)	(1966)	(1975)	(1983)	(1976)	(1967)	(1967)	(1994)	(2004)
MIN	13.5	26.8	29.7	34.0	68.7	53.8	47.8	49.2	30.8	23.3	16.4	13.0
(WY)	(1955)	(1979)	(1966)	(1981)	(1968)	(1988)	(1986)	(2001)	(1988)	(1993)	(1998)	(1954)

## 03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1954 - 2005
ANNUAL TOTAL	49,722	46,488	
ANNUAL MEAN	136	127	103
HIGHEST ANNUAL MEAN			143 1979
LOWEST ANNUAL MEAN			59.6 1986
HIGHEST DAILY MEAN	2,910 Sep 8	1,080 Jun 12	4,500 Feb 13, 1966
LOWEST DAILY MEAN	36 Aug 27	40 Sep 25	10 Sep 28, 1954
ANNUAL SEVEN-DAY MINIMUM	40 Aug 17	44 Sep 19	11 Sep 11, 1998
MAXIMUM PEAK FLOW	c	3,690 Aug 30	12,700* Sep 17, 2004
MAXIMUM PEAK STAGE		6.39 Aug 30	10.83* Sep 17, 2004
INSTANTANEOUS LOW FLOW		40* Sep 24	9.4* Sep 29, 1954
ANNUAL RUNOFF (CFSM)	4.92	4.61	3.72
ANNUAL RUNOFF (INCHÉS)	67.02	62.66	50.49
10 PERCENT EXCEEDS	230	192	186
50 PERCENT EXCEEDS	78	101	71
90 PERCENT EXCEEDS	46	66	27

\* See REMARKS. e Estimated.



### 994

### TENNESSEE RIVER BASIN

### 03455773 LAKE LOGAN AT DAM NEAR HAZELWOOD, NC

LOCATION.--Lat 35°25'21", long 82°55'20", Haywood County, Hydrologic Unit 06010106, at Lake Logan Dam on West Fork Pigeon River near Hazelwood, and at river mi 7.0.

DRAINAGE AREA .-- 33.3 mi2.

### GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1997 to current year. Records for October 1986 to January 1991 and November 1995 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is 2,856.23 ft above NGVD of 1929. Satellite and telephone telemetry at station.

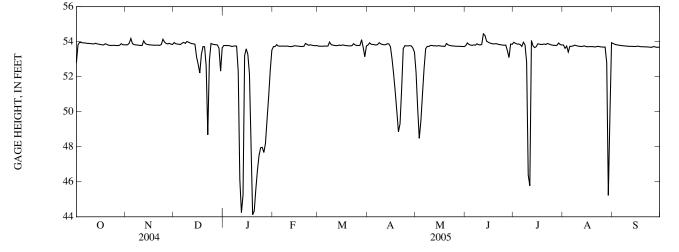
REMARKS.--Records good. Total capacity is 1,040 ft<sup>3</sup>/s-day (top of flashboards), all of which is usable. Filling began November 1931. (See station 0345577330).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 58.60 ft, Sept. 17, 2004; minimum gage height, 42.95 ft, Jan. 19, 2005.

EXTREMES FOR CURRENT YEAR .-- Maximum gage height, 55.59 ft, Aug. 30; minimum gage height, 42.95 ft, Jan. 19.

### GAGE HEIGHT, FEET WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2 3 4 5	52.80 53.82 53.97 53.95 53.93	53.82 53.82 53.92 54.18 53.89	53.95 53.88 53.87 53.85 53.84	53.78 53.78 53.78 53.78 53.78 53.76	53.72 53.72 53.83 53.75 53.74	53.75 53.74 53.74 53.74 53.75	53.81 53.94 53.85 53.84 53.83	52.24 50.20 48.48 49.46 51.00	53.77 53.93 53.85 53.80 53.79	53.97 53.91 53.87 53.87 53.84	53.81 53.62 53.75 53.41 53.74	53.89 53.85 53.83 53.81 53.80
6	53.93	53.83	53.92	53.72	53.75	53.74	53.80	52.47	53.82	53.73	53.73	53.78
7	53.92	53.82	53.96	53.75	53.75	53.75	53.84	53.60	53.80	53.97	53.76	53.77
8	53.90	53.81	53.90	53.76	53.74	53.98	53.94	53.73	53.88	53.82	53.80	53.76
9	53.90	53.79	54.01	53.75	53.75	53.83	53.87	53.73	53.83	52.83	53.77	53.75
10	53.89	53.79	53.97	52.30	53.75	53.81	53.84	53.78	53.81	46.38	53.75	53.74
11	53.88	53.78	53.93	46.13	53.72	53.79	53.82	53.78	53.85	45.77	53.74	53.74
12	53.87	54.05	53.89	44.24	53.72	53.77	53.83	53.76	54.45	54.07	53.72	53.73
13	53.91	53.89	53.88	45.24	53.73	53.78	53.88	53.77	54.36	53.76	53.74	53.73
14	53.87	53.85	53.86	53.21	53.77	53.81	53.87	53.75	54.04	53.66	53.76	53.73
15	53.86	53.83	53.13	53.59	53.76	53.78	53.71	53.77	53.97	53.72	53.72	53.72
16	53.84	53.82	52.71	53.27	53.75	53.81	53.02	53.76	53.93	53.88	53.71	53.75
17	53.82	53.81	52.21	52.16	53.74	53.80	52.14	53.74	53.89	53.86	53.72	53.73
18	53.82	53.80	53.27	48.18	53.73	53.78	51.13	53.74	53.87	53.84	53.72	53.72
19	53.88	53.80	53.72	44.12	53.73	53.77	50.02	53.73	53.88	53.84	53.72	53.71
20	53.85	53.80	53.71	44.33	53.74	53.76	48.86	53.90	53.89	53.84	53.71	53.71
21 22 23 24 25	53.80 53.79 53.78 53.79 53.79	53.80 53.79 53.84 54.14 53.99	52.61 48.68 52.92 53.90 53.86	45.58 46.67 47.51 47.95 47.97	53.90 53.84 53.79 53.83 53.80	53.76 53.78 53.89 53.81 53.79	49.31 51.30 53.61 53.77 53.76	53.82 53.78 53.77 53.76 53.75	53.86 53.84 53.82 53.81 53.80	53.83 53.90 53.87 53.83 53.81	53.70 53.73 53.73 53.71 53.70	53.70 53.70 53.69 53.69 53.69 53.67
26 27 28 29 30 31	53.78 53.78 53.80 53.88 53.82 53.82	53.90 53.87 53.91 53.86 53.84	53.84 53.82 53.82 53.63 52.32 53.65	47.67 48.20 49.56 50.87 52.38 53.52	53.78 53.77 53.78 	53.78 53.79 54.11 53.68 53.14 53.75	53.76 53.77 53.76 53.64 53.40	53.74 53.74 53.74 53.73 53.73 53.73 53.72	53.80 53.49 53.09 53.86 53.85	53.79 53.78 53.80 53.92 53.83 53.82	53.69 53.69 52.79 45.22 49.82 53.94	53.72 53.71 53.68 53.69 53.68
MEAN	53.82	53.87	53.44	50.27	53.76	53.77	53.10	53.15	53.85	53.31	53.29	53.74
MAX	53.97	54.18	54.01	53.78	53.90	54.11	53.94	53.90	54.45	54.07	53.94	53.89
MIN	52.80	53.78	48.68	44.12	53.72	53.14	48.86	48.48	53.09	45.77	45.22	53.67



### 03455773 LAKE LOGAN AT DAM NEAR HAZELWOOD, NC-Continued

### PRECIPITATION RECORDS

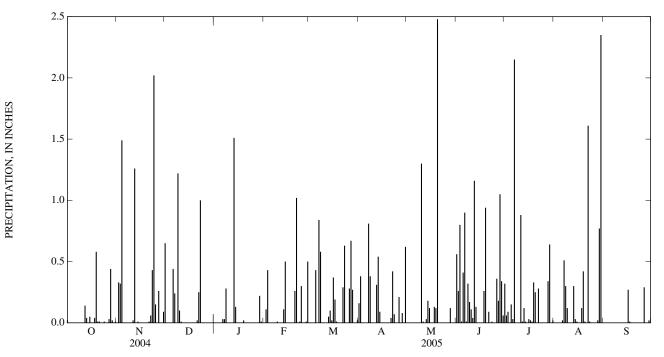
#### PERIOD OF RECORD.--December 1998 to current year.

GAGE.--Tipping-bucket raingage and electronic datalogger. Satellite and telephone telemetry at station.

REMARKS.--Gage is operated in cooperation with Blue Ridge Paper Products, Inc. Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

### PRECIPITATION, TOTAL, INCHES WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY SUM VALUES

					2.1		12025					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.00	0.65	0.00	0.00	0.00	0.16	0.00	0.56	0.32	0.00	0.00
2	0.00	0.33	0.00	0.00	0.11	0.00	0.38	0.00	0.26	0.06	0.00	0.00
3	0.00	0.32	0.00	0.00	0.43	0.00	0.00	0.00	0.80	0.09	0.00	0.00
4	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.41	0.15	0.00	0.00
6	0.00	0.00	0.44	0.03	0.00	0.00	0.00	0.00	0.90	0.03	0.02	0.00
7	0.00	0.00	0.24	0.03	0.00	0.84	0.81	0.00	0.01	2.15	0.51	0.00
8	0.00	0.00	0.00	0.28	0.00	0.58	0.38	0.00	0.32	0.00	0.30	0.00
9	0.00	0.00	1.22	0.00	0.01	0.00	0.00	0.00	0.17	0.00	0.12	0.00
10	0.00	0.00	0.10	0.00	0.00	0.00	0.00	1.30	0.11	0.00	0.00	0.00
11	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.04	0.88	0.00	0.00
12	0.14	1.26	0.00	0.00	0.00	0.00	0.31	0.00	1.16	0.01	0.00	0.00
13	0.04	0.00	0.00	1.51	0.11	0.05	0.54	0.03	0.13	0.12	0.30	0.00
14	0.00	0.01	0.00	0.13	0.50	0.10	0.09	0.18	0.00	0.01	0.03	0.00
15	0.05	0.00	0.00	0.00	0.00	0.02	0.00	0.12	0.00	0.00	0.01	0.00
16	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.03	0.00	0.27
17	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.02	0.00	0.01
18	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.13	0.26	0.01	0.12	0.00
19	0.58	0.00	0.00	0.02	0.00	0.00	0.00	0.12	0.94	0.33	0.42	0.00
20	0.01	0.00	0.00	0.00	0.26	0.00	0.00	2.48	0.00	0.25	0.01	0.00
21	0.01	0.01	0.02	0.00	1.02	0.00	0.04	0.00	0.09	0.00	0.00	0.00
22	0.00	0.06	0.25	0.00	0.00	0.29	0.42	0.00	0.00	0.28	1.61	0.00
23	0.00	0.43	1.00	0.00	0.01	0.63	0.07	0.00	0.01	0.00	0.01	0.00
24	0.01	2.02	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.28	0.21	0.00	0.36	0.00	0.00	0.29
27	0.03	0.26	0.00	0.00	0.01	0.67	0.00	0.00	0.18	0.00	0.00	0.00
28	0.44	0.00	0.00	0.00	0.50	0.27	0.08	0.12	1.05	0.34	0.02	0.00
29	0.02	0.00	0.00	0.22		0.00	0.00	0.00	0.34	0.64	0.77	0.02
30	0.00	0.09	0.00	0.01		0.00	0.62	0.00	0.06	0.00	2.35	0.00
31	0.01		0.00	0.00		0.02		0.00		0.02	0.00	
TOTAL	1.40	6.45	3.93	2.23	3.26	4.75	4.11	4.49	8.17	5.74	6.60	0.59



### 0345577330 WEST FORK PIGEON RIVER NEAR RETREAT, NC

LOCATION.--Lat 35°25'36", long 82°55'11", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on State Highway 215, and 1.6 mi southwest of Retreat.

DRAINAGE AREA.--33.5 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1988 to current year.

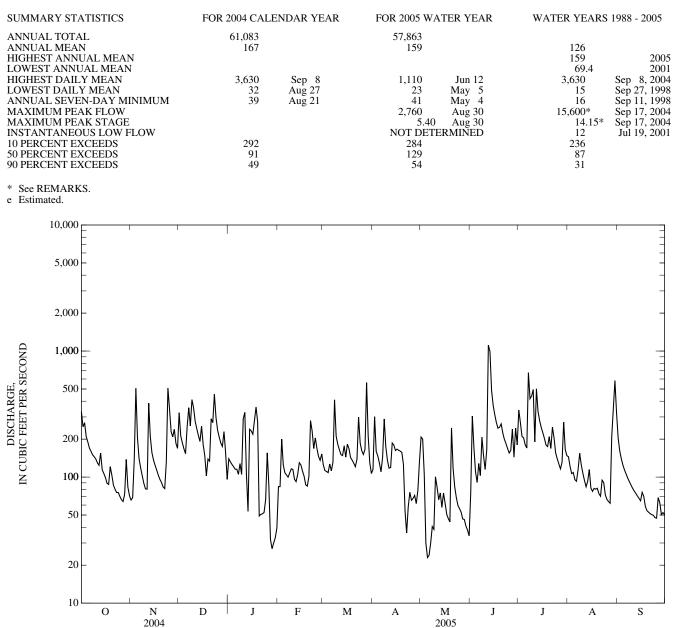
REVISED RECORDS .-- WRD NC-04-1: 1990-1994(M), 1996(M).

GAGE.--Water-stage recorder and crest-stage gages. Elevation of gage is 2,839 ft above NGVD of 1929, from topographic map. Satellite and telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some low flow regulation, at times, caused by Lake Logan (station 03455773). Maximum discharge for period of record from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of computation of peak flow over dam at Lake Logan. Maximum gage-height for period of record from high-water mark at gage.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e330	66	324	140	84 84	125	115	208	75	e340	145	205
2 3	e250 e270	69 140	212 187	132 126	e200	113 111	301 160	200 105	305 171	e270 e210	122 107	161 140
3 4	e270 e210	e506	167	120	125	108	147	e30	110	e210 e205	107	140
5	e190	205	153	115	108	127	129	e23	91	e180	95	114
6	170	1.40	251	117	104	112	110	24	100		02	107
6 7	e170 e160	140 118	251 355	115 105	104 100	112 131	110 144	e24 e30	128 103	e170 673	93 115	106 98
8	e160 e150	102	255	103	100	e410	289	41	208	418	115	98 92
9	e130	89	412	105	116	212	174	39	147	e440	125	87
10	139	81	356	e290	115	182	136	100	115	e495	107	82
11	130	80	278	e326	e96	165	118	83	165	e190	94	78
12	124	386	242	106	e92	151	119	66	1,110	501	84	70
13	155	210	215	53	e105	148	186	75	993	332	93	71
14	114	157	191	240	e130	177	180	57	488	280	115	68
15	107	137	253	233	125	144	163	75	371	248	82	65
16	99	124	181	219	112	182	166	62	312	225	77	76
17	89	114	148	e280	101	168	163	51	271	202	81	70
18	88	104	e102	e360	87	143	161	47	244	179	80	58
19	121	96	139	274	85	136	157	44	249	175	82	54
20	104	91	e134	49	101	129	126	245	264	209	74	53
21	86	84	e290	51	e280	121	e54	117	224	169	70	51
22	80	81	270	51	232	139	e36	84	199	249	95	50
23	75	132	454	52	168	299	58	69	184	204	90	50
24	75	509	298	66	205	186	76	60	168	155	72	48
25	70	348	236	156	169	162	65	56	155	140	67	47
26	66	229	208	86	146	151	68	53	163	127	64	69
27	64	209	186	32	136	166	72	47	e240	116	62	63
28	73	239	175	e27	153	562	62	46	144	131	e210	51
29	138	185	230 157	e30		212	78 133	41 38	e245	272 165	e350 582	52 51
30 31	83 71	169	96	e33 39		130 107	155	38 34	e180	165	382 326	
TOTAL	4,026	5,200	7,155	4,140	3,667	5,409	3,946	2,250	7,822	7,818	4,022	2,408
MEAN	130	173	231	134	131	174	132	72.6	261	252	130	80.3
MAX	330	509	454	360	280	562 107	301	245	1,110	673	582	205
MIN	64	66	96	27	84	107	36	23	75	116	62	47
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1988 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	84.2	110	125	164	183	190	150	118	103	77.9	76.8	103
MAX	262	265	239	314	360	309	268	244	261	252	220	732
(WY)	(1996)	(1993)	(1993)	(1996)	(1990)	(1990)	(1994)	(2003)	(2005)	(2005)	(1994)	(2004)
MIN	18.5	34.7	52.1	83.4	81.1	62.6	72.2	48.1	40.0	31.3	24.7	17.3
(WY)	(1999)	(1999)	(1989)	(2004)	(2002)	(1988)	(1995)	(2001)	(1988)	(1993)	(1998)	(1998)

### 0345577330 WEST FORK PIGEON RIVER NEAR RETREAT, NC-Continued



### 03456100 WEST FORK PIGEON RIVER AT BETHEL, NC

LOCATION.--Lat 35°27'50", long 82°54'00", Haywood County, Hydrologic Unit 06010106, on left bank 20 ft downstream of bridge on Secondary Road 1112, 0.6 mi southwest of Bethel, 1.6 mi upstream from confluence with East Fork Pigeon River, and 5.6 mi downstream of Lake Logan.

DRAINAGE AREA.--58.4 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1981 to current year.

REVISED RECORDS .-- WDR NC-04-1: 1983(M), 1994(M).

GAGE.--Water-stage recorder. Datum of gage is 2,667.78 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite and telephone telemetry at station.

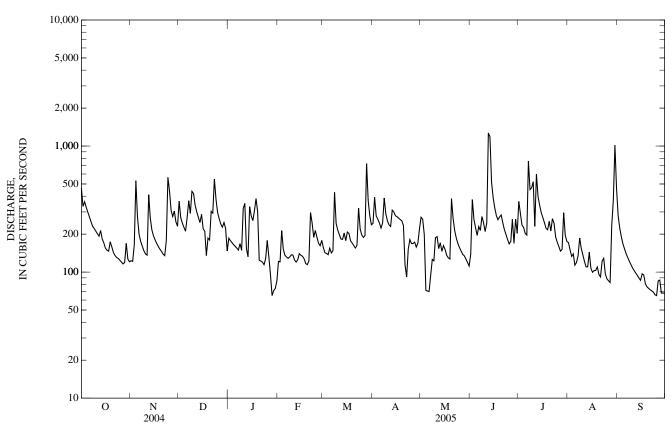
REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable regulation, at times, caused by Lake Logan (station 03455773). Maximum discharge for period of record from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Maximum gage height for period of record from high-water mark in gage. Minimum discharge for current water year also occurred Aug. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	463	123	366	186	122	157	243	272	139	364	171	282
2	332	122	270	178	121	142	392	263	377	292	150	223
3	361	164	245	171	214	141	279	199	262	235	133	190
4	327	531	226	e165	152	137	263	72	225	227	139	167
5	299	273	211	e160	136	155	245	71	195	202	113	153
6	274	200	272	e155	132	142	223	70	230	197	119	140
7	251	175	369	150	128	148	245	94	214	761	135	130
8	231	161	292	168	132	429	387	126	276	452	186	122
9	222	148	437	149	137	243	e290	123	247	466	154	115
10	211	139	420	320	137	215	e255	188	210	521	137	108
11	201	136	338	351	e125	198	237	191	245	231	121	103
12	193	411	300	154	e120	183	e230	154	1,270	599	110	98
13	214	268	272	132	e125	182	e310	171	1,180	398	110	94
14	183	216	247	331	e140	204	e300	146	517	340	144	90
15	170	194	287	279	e136	178	e280	162	389	297	107	86
16	155	180	220	256	134	208	275	151	323	271	100	97
17	149	169	211	306	128	202	268	136	280	247	103	95
18	147	160	135	383	117	177	261	130	260	222	103	81
19	174	152	186	301	114	170	255	127	274	217	110	76
20	158	146	e180	124	122	162	234	382	284	253	96	74
21	143	139	303	122	297	155	114	266	246	212	91	72
22	135	135	294	120	245	163	91	213	217	266	122	71
23	130	178	548	114	189	322	152	186	198	244	128	69
24	128	564	379	128	214	219	181	168	181	190	97	66
25	124	439	297	178	189	197	168	156	167	172	88	65
26 27 28 29 30 31	120 116 119 169 127 121	308 276 305 250 231	265 241 227 248 222 147	132 95 65 71 74 85	170 162 179 	188 195 727 369 279 237	168 173 158 169 221	147 138 135 127 119 112	175 262 169 264 203	159 147 151 296 196 175	85 83 233 374 1,020 461	85 86 68 68 68
TOTAL	6,147	6,893	8,655	5,603	4,317	6,824	7,067	4,995	9,479	9,000	5,323	3,242
MEAN	198	230	279	181	154	220	236	161	316	290	172	108
MAX	463	564	548	383	297	727	392	382	1,270	761	1,020	282
MIN	116	122	135	65	114	137	91	70	139	147	83	65
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1981 - 2005,	BY WATE	R YEAR (W	Y)			
MEAN	96.6	134	171	200	247	259	221	171	124	96.9	92.1	114
MAX	336	341	334	450	522	461	481	381	316	290	317	1,057
(WY)	(1996)	(1993)	(1984)	(1998)	(1998)	(1997)	(1983)	(2003)	(2005)	(2005)	(1994)	(2004)
MIN	30.5	43.0	83.5	53.5	102	83.6	83.5	81.0	53.0	42.0	29.3	27.6
(WY)	(1999)	(1982)	(1989)	(1981)	(1986)	(1988)	(1986)	(2001)	(1988)	(2002)	(1993)	(1998)

# 03456100 WEST FORK PIGEON RIVER AT BETHEL, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WA7	TER YEAR	WATER YEARS	1981 - 2005
ANNUAL TOTAL ANNUAL MEAN	87,974 240		77,545 212		162	2004
HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN HIGHEST DAILY MEAN	5,720	Sep 17	1.270	Jun 12	224 87.5 5.720	2004 1988 Sep 17, 2004
LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM	64 69	Aug 27 Aug 22	65 70	Jan 28 Sep 19	9.2 16	Sep 2, 1986 Sep 2, 1986
MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE		C	4,450 7.39	Aug 30 Aug 30	19,000* 16.27*	Sep 17, 2004 Sep 17, 2004
INSTANTANEOUS LOW FLOW 10 PERCENT EXCEEDS	367		57* 339	Aug 4	4.2 305	Sep 5, 1986
50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	143 87		179 102		113 44	

\* See REMARKS. e Estimated.



### 03456500 EAST FORK PIGEON RIVER NEAR CANTON, NC

LOCATION.--Lat 35°27'42", long 82°52'11", Haywood County, Hydrologic Unit 06010106, on right bank 800 ft upstream from bridge on U.S. Highway 276, 0.3 mi downstream of Dix Creek, 1.6 mi upstream from confluence with West Fork Pigeon River, and 5.2 mi southwest of Canton.

DRAINAGE AREA.--51.5 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1954 to current year.

REVISED RECORDS .-- WDR NC-73-1: 1966(M), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 2,674.34 ft above NGVD of 1929 (Tennessee Valley Authority bench mark). Satellite and telephone telemetry at station.

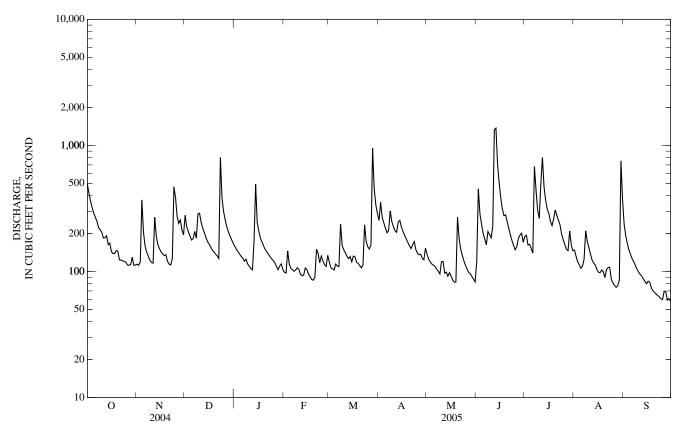
REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record, from rating curve extended above 6,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow. Minimum discharge for period of record also occurred Dec. 11, 1981, result of freezeup, and Oct. 9, 1994.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492	114	279	158	99	119	254	137	120	190	148	237
2	413	112	225	150	97	107	354	125	452	194	132	192
3	360	119	207	143	145	105	268	119	287	162	119	166
4	320	369	191	137	114	103	243	114	237	164	113	148
5	288	205	177	131	105	114	221	112	200	152	106	136
6	268	159	182	127	103	110	202	110	181	140	e110	126
7	249	142	208	120	100	109	211	104	163	681	e125	119
8	222	132	184	125	103	238	302	100	207	444	e210	112
9	214	123	285	115	107	161	248	95	196	306	173	105
10	204	118	289	110	104	148	226	120	185	263	155	99
11	184	116	244	106	95	140	210	120	229	492	137	95
12	185	269	220	103	93	132	204	97	1,330	801	123	92
13	192	190	203	172	93	126	246	99	1,370	469	116	87
14	163	163	186	492	107	131	254	92	708	368	112	83
15	168	151	172	244	103	119	225	98	503	312	104	80
16	143	143	164	208	95	132	207	92	383	289	98	84
17	138	138	156	e183	91	130	193	85	312	249	98	82
18	139	134	148	e171	86	118	181	82	277	231	103	74
19	146	135	142	e159	85	116	170	82	281	261	99	70
20	145	120	e137	149	90	111	160	270	249	307	89	68
21	124	114	e133	143	150	107	152	183	219	278	103	66
22	123	112	127	136	139	112	163	150	195	255	108	64
23	121	127	801	e131	117	234	172	134	176	234	108	63
24	120	469	384	e126	132	173	149	121	161	197	86	61
25	119	387	299	e122	121	157	139	112	149	178	81	60
26 27 28 29 30 31	112 112 113 130 112 112	273 240 256 213 195	257 225 206 191 179 167	117 110 103 110 115 104	113 110 134 	151 163 951 453 339 288	136 137 127 124 153	104 98 96 91 87 83	157 183 194 201 170	163 150 146 209 163 146	77 75 77 85 754 375	70 69 59 61 58
TOTAL	5,931	5,538	6,968	4,620	3,031	5,697	6,031	3,512	9,675	8,594	4,399	2,886
MEAN	191	185	225	149	108	184	201	113	322	277	142	96.2
MAX	492	469	801	492	150	951	354	270	1,370	801	754	237
MIN	112	112	127	103	85	103	124	82	120	140	75	58
CFSM	3.72	3.58	4.36	2.89	2.10	3.57	3.90	2.20	6.26	5.38	2.76	1.87
IN.	4.28	4.00	5.03	3.34	2.19	4.12	4.36	2.54	6.99	6.21	3.18	2.08
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WATI	ER YEARS	1954 - 2005,	BY WATE	R YEAR (W	YY)			
MEAN	108	133	147	165	201	230	206	155	118	78.3	77.9	99.3
MAX	363	484	337	444	517	541	480	453	339	277	263	1,057
(WY)	(1965)	(1980)	(1962)	(1998)	(1998)	(1979)	(1957)	(1976)	(1967)	(2005)	(1994)	(2004)
MIN	17.1	27.9	42.4	33.8	71.9	60.9	63.2	59.8	35.7	25.3	25.1	16.0
(WY)	(1955)	(1955)	(1956)	(1956)	(1986)	(1988)	(1986)	(1986)	(1988)	(1986)	(2002)	(1954)

# 03456500 EAST FORK PIGEON RIVER NEAR CANTON, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WAT	FER YEAR	WATER YEARS	3 1954 - 2005
ANNUAL TOTAL	77,854		66,882			
ANNUAL MEAN	213		183		143	
HIGHEST ANNUAL MEAN					207	2004
LOWEST ANNUAL MEAN					71.9	1988
HIGHEST DAILY MEAN	6,200	Sep 8	1,370	Jun 13	6,200	Sep 8, 2004
LOWEST DAILY MEAN	43	Jul 23	58	Sep 30	13	Sep 13, 1998
ANNUAL SEVEN-DAY MINIMUM	47	Jul 18	63	Sep 24	13	Sep 12, 1998
MAXIMUM PEAK FLOW			2,870	Jun 12	12,900*	Sep 17, 2004
MAXIMUM PEAK STAGE			5.27	Jun 12	13.05	Sep 17, 2004
INSTANTANEOUS LOW FLOW			54	Sep 30	12*	Jan 9, 1956
ANNUAL RUNOFF (CFSM)	4.13		3.56	-	2.79	
ANNUAL RUNOFF (INCHÉS)	56.24		48.31		37.85	
10 PERCENT EXCEEDS	321		288		266	
50 PERCENT EXCEEDS	117		143		101	
90 PERCENT EXCEEDS	65		92		36	

\* See REMARKS. e Estimated.



### 03456500 EAST FORK PIGEON RIVER NEAR CANTON, NC-Continued

### PRECIPITATION RECORDS

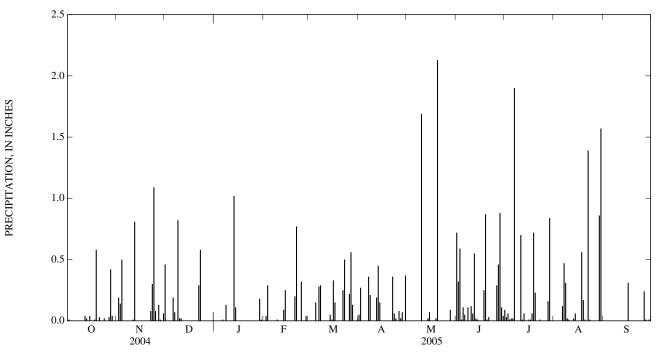
#### PERIOD OF RECORD.--October 1999 to current year.

GAGE.--Tipping-bucket raingage and electronic datalogger. Satellite and telephone telemetry at station.

REMARKS.--Gage is operated in cooperation with Blue Ridge Paper Products, Inc. Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

### PRECIPITATION, TOTAL, INCHES WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2 3 4 5	$\begin{array}{c} 0.00\\ 0.01\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00 \\ 0.19 \\ 0.14 \\ 0.50 \\ 0.00 \end{array}$	$0.46 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.04\\ 0.29\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.15 \end{array}$	$0.05 \\ 0.27 \\ 0.00 \\ 0.00 \\ 0.00$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	0.72 0.32 0.59 0.01 0.11	$\begin{array}{c} 0.09 \\ 0.03 \\ 0.06 \\ 0.01 \\ 0.02 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$
6 7 8 9 10	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.19 \\ 0.07 \\ 0.00 \\ 0.82 \\ 0.02 \end{array}$	$\begin{array}{c} 0.01 \\ 0.00 \\ 0.13 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.01\\ 0.00\end{array}$	$0.00 \\ 0.28 \\ 0.29 \\ 0.00 \\ 0.00$	$0.00 \\ 0.36 \\ 0.21 \\ 0.00 \\ 0.00$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 1.69 \end{array}$	$\begin{array}{c} 0.05 \\ 0.00 \\ 0.11 \\ 0.00 \\ 0.12 \end{array}$	$0.02 \\ 1.90 \\ 0.00 \\ 0.00 \\ 0.00$	0.12 0.47 0.31 0.02 0.01	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$
11 12 13 14 15	$0.00 \\ 0.04 \\ 0.02 \\ 0.00 \\ 0.04$	$\begin{array}{c} 0.01 \\ 0.81 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.02\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 1.02\\ 0.11\\ 0.00 \end{array}$	$0.00 \\ 0.00 \\ 0.09 \\ 0.25 \\ 0.00$	$0.00 \\ 0.00 \\ 0.00 \\ 0.05 \\ 0.01$	$0.00 \\ 0.19 \\ 0.45 \\ 0.15 \\ 0.00$	$0.00 \\ 0.00 \\ 0.00 \\ 0.02 \\ 0.07$	$\begin{array}{c} 0.06 \\ 0.55 \\ 0.02 \\ 0.01 \\ 0.00 \end{array}$	$\begin{array}{c} 0.70 \\ 0.01 \\ 0.06 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.02\\ 0.06\\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$
16 17 18 19 20	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.01 \\ 0.58 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.20$	$\begin{array}{c} 0.33 \\ 0.15 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$0.00 \\ 0.00 \\ 0.00 \\ 0.02 \\ 2.13$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.25 \\ 0.87 \\ 0.01 \end{array}$	$\begin{array}{c} 0.01 \\ 0.01 \\ 0.06 \\ 0.72 \\ 0.23 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.56 \\ 0.17 \\ 0.01 \end{array}$	$\begin{array}{c} 0.31 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$
21 22 23 24 25	$\begin{array}{c} 0.03 \\ 0.00 \\ 0.00 \\ 0.02 \\ 0.00 \end{array}$	$0.00 \\ 0.08 \\ 0.30 \\ 1.09 \\ 0.08$	$\begin{array}{c} 0.00 \\ 0.29 \\ 0.58 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	0.77 0.00 0.00 0.32 0.00	$0.00 \\ 0.25 \\ 0.50 \\ 0.00 \\ 0.00$	$0.00 \\ 0.36 \\ 0.06 \\ 0.02 \\ 0.00$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.03 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.01\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00 \\ 1.39 \\ 0.01 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00 \end{array}$
26 27 28 29 30 31	$\begin{array}{c} 0.00 \\ 0.03 \\ 0.42 \\ 0.04 \\ 0.00 \\ 0.00 \end{array}$	0.00 0.13 0.01 0.00 0.06	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.18 \\ 0.01 \\ 0.00 \end{array}$	0.00 0.04 0.00  	$\begin{array}{c} 0.22 \\ 0.56 \\ 0.13 \\ 0.00 \\ 0.00 \\ 0.01 \end{array}$	0.08 0.02 0.07 0.00 0.37	$0.00 \\ 0.00 \\ 0.09 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00$	0.29 0.46 0.88 0.11 0.04	$\begin{array}{c} 0.00\\ 0.00\\ 0.16\\ 0.84\\ 0.00\\ 0.00\end{array}$	$\begin{array}{c} 0.00 \\ 0.00 \\ 0.00 \\ 0.86 \\ 1.57 \\ 0.00 \end{array}$	0.24 0.01 0.00 0.01 0.00
TOTAL	1.24	3.40	2.45	1.46	2.01	2.93	2.66	4.02	5.61	4.94	5.58	0.57



#### 03456991 PIGEON RIVER NEAR CANTON, NC

LOCATION.--Lat 35°31'23", long 82°50'48", Haywood County, Hydrologic Unit 06010106, on right bank 600 ft upstream from State Highway 215 bridge, 1.3 mi upstream from U.S. Highways 19 and 23 at Canton, and at mile 64.9.

DRAINAGE AREA.--130 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods published in WSP 1306. Published as Pigeon River at Canton, NC (03457000) May 1907 to June 1909, October 1928 to September 1983.

REVISED RECORDS .-- WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1903(M). WDR NC-91-1: 1984-89(M).

GAGE.--Water-stage recorder. Datum of gage is 2,581.66 ft above NGVD of 1929 (Tennessee Valley Authority bench mark). Prior to June 1909, nonrecording gage at bridge 1.2 mi downstream at different datum. Dec. 6, 1928, to Jan. 3, 1929, nonrecording gage at site 0.8 mi downstream at different datum. Prior to Oct. 1, 1983, water-stage recorder at site 0.8 mi downstream at different datum. Satellite and telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation and considerable regulation at low flow, since 1932, caused by Lake Logan (station 03455773) on West Fork Pigeon River 11.2 mi upstream. Prior to regulation, maximum discharge: 21,500 ft<sup>3</sup>/ s, Aug. 16, 1928; gage height: 16.40 ft; minimum discharge: 39 ft<sup>3</sup>/s, Sept. 3, 1930. Maximum discharge for period of record from rating curve extended above 20,000 ft<sup>3</sup>/s on basis of slope-area measurment of peak flow. Minimum discharge for period of record, at former site, result of freezeup. Minimum discharge for current water year also occurred Sept. 30.

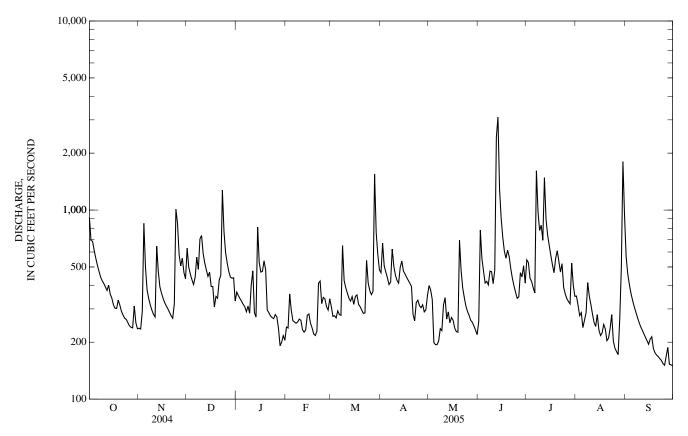
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about 1810 is believed to have been approximately equal to that of Aug. 30, 1940, and flood of June 15, 1876, reached a stage of 18.3 ft; discharge, 25,700 ft<sup>3</sup>/s, at former site, from studies by Tennessee Valley Authority.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	916	237	629	368	241	309	466	399	257	545	351	567
2	692	235	499	352	238	274	669	378	783	527	313	461
3	682	291	458	340	360	276	507	336	552	436	276	405
4	611	851	428	329	295	269	470	199	476	420	287	363
5	556	498	404	317	e260	293	438	194	411	388	239	334
6	510	379	441	308	e256	281	404	194	420	364	261	309
7	474	341	564	290	e252	278	416	203	402	1,610	286	290
8	443	315	485	311	e256	649	622	236	475	978	413	272
9	423	296	703	285	e265	424	505	230	473	781	352	256
10	409	281	734	401	261	388	452	315	408	831	316	242
11	392	272	588	477	233	364	425	345	482	692	282	233
12	376	644	524	287	e226	342	411	265	2,430	1,480	254	222
13	401	474	482	272	232	330	499	289	3,100	896	242	213
14	359	392	446	813	278	349	537	253	1,290	737	280	204
15	342	364	469	528	282	317	476	270	906	650	232	195
16	315	341	394	470	e252	349	459	262	717	575	217	208
17	303	323	394	474	e238	356	441	237	606	513	224	214
18	302	311	307	539	e221	317	425	228	556	466	248	185
19	334	300	350	484	e217	308	410	226	614	555	235	176
20	314	288	e342	296	229	295	395	693	568	609	204	171
21	291	276	425	287	e410	284	281	480	490	537	210	168
22	278	268	452	276	421	286	259	387	435	470	236	164
23	268	319	1,270	e270	e320	542	324	344	397	e520	280	160
24	264	1,010	770	267	e345	411	334	310	367	e390	203	154
25	254	850	596	e280	339	375	312	291	341	e360	186	151
26 27 28 29 30 31	244 240 238 311 253 235	581 507 556 468 432	525 474 442 436 438 330	272 237 191 200 217 205	308 296 339 	357 371 1,550 761 583 483	305 315 289 297 353	277 261 255 244 232 219	348 467 443 507 411	e340 328 319 524 401 350	179 172 264 495 1,810 935	169 188 153 152 150
TOTAL	12,030	12,700	15,799	10,643	7,870	12,771	12,496	9,052	20,132	18,592	10,482	7,129
MEAN	388	423	510	343	281	412	417	292	671	600	338	238
MAX	916	1,010	1,270	813	421	1,550	669	693	3,100	1,610	1,810	567
MIN	235	235	307	191	217	269	259	194	257	319	172	150
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WATI	ER YEARS	1932 - 2005*	*, BY WAT	ER YEAR (	WY)			
MEAN	222	267	325	417	472	528	463	338	266	198	201	221
MAX	787	964	872	1,017	1,150	1,058	1,005	981	781	600	1,476	2,504
(WY)	(1965)	(1980)	(1933)	(1937)	(1939)	(1975)	(1983)	(1976)	(1967)	(2005)	(1940)	(2004)
MIN	48.2	59.2	64.5	85.3	150	155	167	132	96.5	88.6	65.9	47.8
(WY)	(1955)	(1955)	(1940)	(1956)	(1941)	(1988)	(1986)	(1941)	(1941)	(2002)	(1954)	(1998)

# 03456991 PIGEON RIVER NEAR CANTON, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WAT	FER YEAR	WATER YEARS	1932 - 2005*
ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN	184,232 503		149,696 410		326 503 170	1949 1988
HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW	19,800 130 144	Sep 8 Jul 21 Jul 18	3,100 150 160 6,500 7.80 141*	Jun 13 Sep 30 Sep 24 Jun 12 Jun 12 Sep 26	$ \begin{array}{r} 17,800\\ 27\\ 40\\ 48,000^{*}\\ 22.80\\ 15^{*} \end{array} $	Sep 8, 2004 Sep 7, 1954 Sep 13, 1998 Sep 17, 2004 Sep 17, 2004 Jan 8, 1956
10 PERCENT EXCEEDS 50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	632 291 170		617 342 222	50p 20	605 232 87	Jun 0, 1930

\* Regulated period only (1932-2005). See REMARKS. e Estimated.



#### 03459500 PIGEON RIVER NEAR HEPCO, NC

LOCATION.--Lat 35°38'06", long 82°59'24", Haywood County, Hydrologic Unit 06010106, on left bank 95 ft east of Interstate Highway 40, 0.8 mi downstream of Jonathan Creek, 2.0 mi south of Hepco, 2.4 mi upstream from Fines Creek, and at mile 45.1.

DRAINAGE AREA .-- 350 mi<sup>2</sup>.

PERIOD OF RECORD .-- July 1927 to current year.

REVISED RECORDS .-- WSP 823: Drainage area. WSP 893: 1928-31, 1932(M), 1933-36, 1937-39(M).

GAGE.--Water-stage recorder. Datum of gage is 2,335.95 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite and telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Regulation by Lake Junaluska (station 03458319) on Richland Creek and Lake Logan (station 03455773) on West Fork Pigeon River for periods at low flow, combined capacity of reservoirs, about 2,000 ft<sup>3</sup>/s-day. Maximum discharge for period of record, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of slope-conveyance measurement of peak flow. Minimum discharge for current water year also occurred Sept. 26.

EXTREMES OUTSIDE PERIOD OF RECORD .-- Floods of June 1876 and February 1902 reached a stage of about 18 ft, from flood profiles by Tennessee Valley Authority; discharge, about 42,000 ft<sup>3</sup>/s.

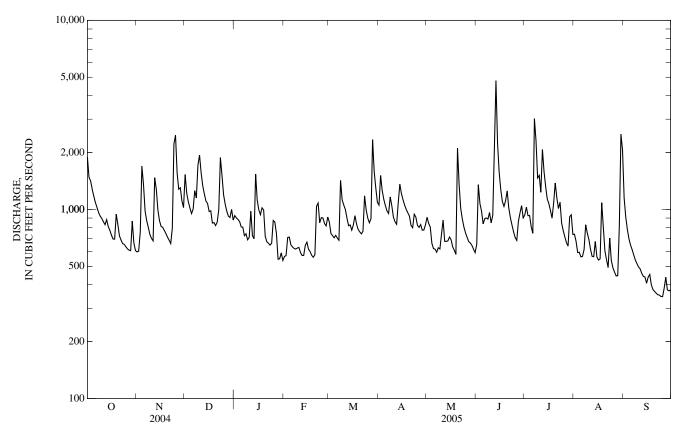
	WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,890	596	1,530	927	564	857	1,050	909	654	936	739	1,150
2	1,480	601	1,220	901	569	746	1,510	843	1,350	1,030	678	913
3	1,410	761	1,100	885	710	727	1,260	808	1,070	927	591	784
4	1,280	1,690	1,020	862	714	708	1,130	662	979	927	594	699
5	1,170	1,360	950	808	650	729	1,050	621	838	809	561	647
6	1,090	982	1,000	805	633	705	981	616	893	748	564	612
7	1,020	872	1,260	726	622	687	951	594	901	3,020	613	574
8	962	805	1,150	743	617	1,420	1,160	627	889	2,310	829	540
9	921	737	1,720	691	624	1,120	1,040	617	964	1,470	750	516
10	895	702	1,940	712	630	1,060	909	737	849	1,510	693	496
11	860	682	1,560	977	591	999	860	879	929	1,230	616	484
12	830	1,470	1,330	727	570	900	834	677	2,080	2,080	565	459
13	883	1,280	1,210	699	571	820	1,080	677	4,790	1,590	562	443
14	812	993	1,110	1,540	645	828	1,360	682	2,230	1,320	677	439
15	776	872	1,070	1,120	671	777	1,210	714	1,570	1,140	560	407
16	731	813	974	993	616	828	1,120	691	1,270	1,070	540	438
17	697	804	983	938	598	927	1,050	633	1,100	988	548	453
18	696	774	847	1,020	571	835	999	608	1,040	898	1,080	398
19	943	745	852	993	558	783	959	578	1,110	1,080	808	377
20	833	714	821	719	577	760	921	2,110	1,250	1,380	603	368
21	724	688	855	674	1,040	742	822	1,360	1,020	1,150	543	361
22	689	660	999	662	1,080	766	800	1,010	904	1,010	492	354
23	659	796	1,880	647	850	1,180	943	889	826	1,090	705	352
24	653	2,220	1,510	662	905	993	911	807	760	845	536	346
25	635	2,470	1,190	874	901	899	824	752	710	771	491	346
26 27 28 29 30 31	618 609 605 867 665 605	1,560 1,280 1,300 1,110 1,020	1,070 978 921 906 1,000 878	857 742 545 548 589 537	842 817 911  	850 893 2,340 1,590 1,300 1,090	803 832 776 778 829	712 675 665 645 616 591	686 864 957 1,050 902	715 667 639 914 936 737	466 445 446 816 2,500 2,060	384 438 375 371 375
TOTAL	27,508	31,357	35,834	25,123	19,647	29,859	29,752	24,005	35,435	35,937	22,671	14,899
MEAN	887	1,045	1,156	810	702	963	992	774	1,181	1,159	731	497
MAX	1,890	2,470	1,940	1,540	1,080	2,340	1,510	2,110	4,790	3,020	2,500	1,150
MIN	605	596	821	537	558	687	776	578	654	639	445	346
STATIST	ICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1927 - 2005	BY WATE	R YEAR (W	/Y)			
MEAN	417	509	673	871	1,018	1,137	983	732	546	434	426	419
MAX	1,353	1,627	2,125	2,275	2,227	2,455	2,010	1,798	1,502	1,159	2,246	3,636
(WY)	(1965)	(1980)	(1933)	(1937)	(1990)	(1929)	(1936)	(2003)	(1967)	(2005)	(1940)	(2004)
MIN	122	133	193	194	319	346	359	283	200	183	163	123
(WY)	(1955)	(1954)	(1940)	(1940)	(1941)	(1988)	(1986)	(1941)	(1988)	(1986)	(1953)	(1999)

# DISCHARGE, CUBIC FEET PER SECOND

# 03459500 PIGEON RIVER NEAR HEPCO, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1927 - 2005	
ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN	351,850 961		332,027 910		679 943 341	1949 1988
HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM	23,900 308 351	Sep 8 Jul 22 Jul 18	4,790 346 358	Jun 13 Sep 24 Sep 19	23,900 95 100	Sep 8, 2004 Sep 30, 1941 Sep 12, 1999
MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW 10 PERCENT EXCEEDS	1.470		7,360 7.75 338* 1,350	Jun 13 Jun 13 Sep 25	36,500* 17.31 81 1,250	Sep 17, 2004 Sep 17, 2004 Sep 30, 1941
50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	646 392		829 559		509 207	

\* See REMARKS.



### 03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC

LOCATION.--Lat 35°40'03", long 83°04'25", Haywood County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park, on left bank 20 ft downstream of bridge on State Highway 284, 500 ft upstream from Little Cataloochee Creek, 2 mi north of Cataloochee, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to September 1952, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1306.

# REVISED RECORDS .-- WSP 823: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,456.88 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite telemetry at station.

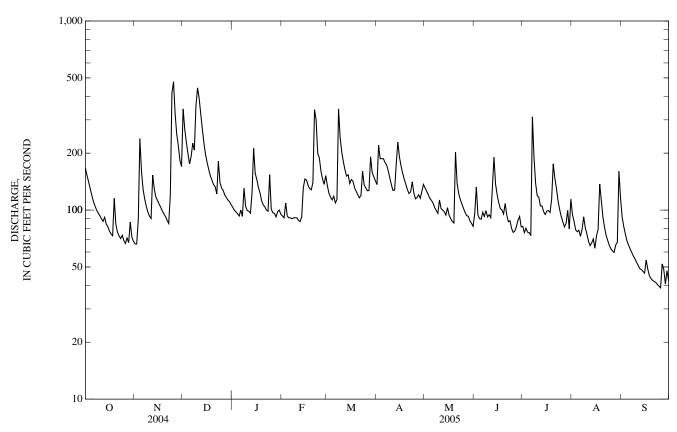
REMARKS.--Records good except those for estimated daily discharges, which are poor. Minimum discharge for period of record also occurred Jan. 2, 1940, and Dec. 17, 24, 1943, result of freezeup. Minimum discharge for current water year also occurred Sept. 26.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	66	343	103	e93	135	136	131	96	82	95	92
2	152	66	268	100	e91	123	221	126	132	76	87	82
3	141	89	229	98	e109	117	187	121	94	80	79	75
4	130	238	199	96	e93	113	187	115	90	76	77	69
5	120	161	175	93	e91	118	187	113	89	76	78	65
6	111	129	192	100	e91	109	179	109	97	73	73	62
7	105	114	226	93	e90	114	173	103	93	311	79	60
8	100	105	207	131	e91	342	162	99	99	189	92	57
9	96	97	355	105	e91	242	148	96	92	139	81	55
10	93	93	443	99	e91	203	136	113	94	119	75	e53
11	90	90	390	99	e88	180	127	102	91	117	68	e51
12	87	153	322	96	e87	163	128	100	130	105	65	e49
13	92	129	268	123	e92	151	175	98	191	105	67	48
14	84	117	225	212	e131	154	229	94	137	98	70	47
15	82	112	196	156	e146	138	191	103	120	95	63	46
16	77	108	178	145	e144	145	171	94	109	99	73	54
17	75	103	164	132	e135	142	157	90	102	99	79	49
18	73	99	152	e123	e130	131	146	87	100	97	137	45
19	115	95	144	e112	e128	126	137	85	95	114	113	43
20	84	93	136	107	e140	121	128	203	108	176	92	43
21	77	88	133	e104	e340	116	122	138	94	147	81	42
22	73	85	122	e100	e299	120	125	122	87	130	74	41
23	71	120	181	e99	e199	161	141	114	88	112	69	40
24	74	415	139	e154	e189	135	123	108	80	101	65	40
25	69	477	131	e101	161	131	115	102	76	93	62	39
26 27 28 29 30 31	67 71 67 86 72 68	324 252 219 183 170	127 120 116 113 111 107	e97 e96 e92 e98 e100 e95	146 137 152 	127 127 191 158 150 143	117 120 115 126 137	97 93 93 88 85 82	77 82 88 93 82	87 81 85 100 80 114	61 60 65 68 161 116	52 48 41 48 42
TOTAL	2,869	4,590	6,212	3,459	3,775	4,626	4,546	3,304	3,006	3,456	2,525	1,578
MEAN	92.5	153	200	112	135	149	152	107	100	111	81.5	52.6
MAX	167	477	443	212	340	342	229	203	191	311	161	92
MIN	67	66	107	92	87	109	115	82	76	73	60	39
CFSM	1.88	3.11	4.07	2.27	2.74	3.03	3.08	2.17	2.04	2.27	1.66	1.07
IN.	2.17	3.47	4.70	2.62	2.85	3.50	3.44	2.50	2.27	2.61	1.91	1.19
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1934 - 2005	@ BY WAT	ER YEAR (	WY)			
MEAN	53.5	72.3	113	162	178	201	156	114	85.0	74.9	71.6	58.2
MAX	146	159	302	392	394	496	305	289	252	182	223	361
(WY)	(1990)	(1980)	(1973)	(1937)	(1990)	(1963)	(1936)	(2003)	(1967)	(1949)	(1940)	(2004)
MIN	21.3	22.3	26.0	35.5	49.5	63.2	58.8	46.2	34.7	29.6	26.9	23.5
(WY)	(1999)	(1940)	(1940)	(1940)	(1941)	(1988)	(1986)	(1986)	(1986)	(1986)	(1987)	(1998)

# 03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALEN	IDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS	1934 - 2005 <sup>@</sup>
ANNUAL TOTAL	52,400		43,946			
ANNUAL MEAN	143		120		112	
HIGHEST ANNUAL MEAN					171	1994
LOWEST ANNUAL MEAN					51.5	1986
HIGHEST DAILY MEAN	1,900	Sep 17	477	Nov 25	2,690	Mar 16, 1973
LOWEST DAILY MEAN	55	Jul 23	39	Sep 25	12	Jan 2, 1940
ANNUAL SEVEN-DAY MINIMUM	61	Jul 19	41	Sep 19	18	Oct 21, 1998
MAXIMUM PEAK FLOW			734	Nov 24	5,080	Mar 6, 1963
MAXIMUM PEAK STAGE			4.16	Nov 24	8.08	Mar 6, 1963
INSTANTANEOUS LOW FLOW			37*	Sep 25	9.4*	Jan 2, 1940
ANNUAL RUNOFF (CFSM)	2.91		2.45	-	2.27	
ANNUAL RUNOFF (INCHES)	39.62		33.23		30.80	
10 PERCENT EXCEEDS	227		188		204	
50 PERCENT EXCEEDS	106		103		82	
90 PERCENT EXCEEDS	72		67		34	
<sup>@</sup> See PERIOD OF RECORD.						
* See REMARKS.						
See REMARKS.						

e Estimated.



### 03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC

LOCATION.--Lat 35°47'01", long 83°06'43", Cocke County Tennessee, Hydrologic Unit 06010105, on left bank, 550 ft upstream of Browns Bridge on Waterville Road, 0.9 mi downstream of North Carolina and Tennessee state lines, 1.0 mi northwest of Waterville, and at mile 25.

DRAINAGE AREA.--538 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1997 to current year.

REVISED RECORDS .-- WDR NC-04-1: 1997(M), 1998(M), 2003(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,360 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

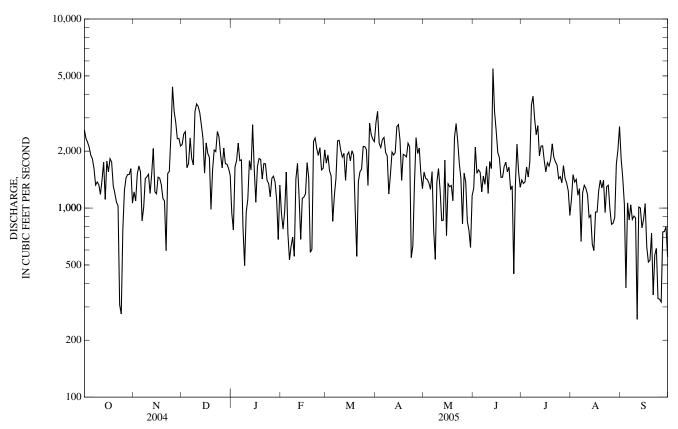
REMARKS.--Records fair except those for estimated daily discharges, which are poor. Considerable regulation, caused by Walters Hydroelectric Plant, 1.0 mi upstream. Maximum discharge for period of record from rating curve extended above 11,000 ft<sup>3</sup>/s on basis of slope-conveyance measurement of peak flow. Minimum discharge for period of record and current water year affected by regulation.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,590	1,220	2,170	938	937	1,730	2,840	1,550	1,270	1,410	1,110	1,830
2	2,330	1,090	2,460	766	774	1,910	3,250	1,430	2,100	1,350	1,500	1,450
3	2,230	1,510	2,540	1,650	961	1,580	2,200	1,420	1,530	1,380	1,370	1,050
4	2,090	1,670	1,630	1,780	1,550	1,480	2,090	1,360	1,590	1,650	1,420	378
5	1,900	1,550	1,720	2,210	736	851	2,300	1,260	1,550	1,460	1,170	1,070
6	1,820	856	2,350	1,780	532	1,160	2,360	1,560	1,220	1,760	1,270	865
7	1,620	1,010	1,830	1,800	628	1,430	1,970	764	1,480	3,510	665	1,040
8	1,320	1,430	1,690	781	702	2,270	1,890	535	1,330	3,910	1,210	871
9	1,370	1,460	3,230	496	556	2,280	1,190	1,370	1,660	2,980	1,320	908
10	1,330	1,510	3,550	950	1,420	2,020	1,500	1,620	1,200	2,440	1,270	887
11	1,180	1,190	3,450	1,120	1,730	1,860	1,980	1,250	1,760	2,730	1,180	257
12	1,410	1,510	3,190	1,780	1,150	1,950	1,910	858	1,620	1,890	893	1,010
13	1,750	2,070	2,750	1,590	683	1,400	1,960	863	5,460	2,120	917	1,000
14	1,110	1,220	2,350	2,760	1,130	1,910	2,700	1,800	3,230	2,130	645	786
15	1,770	1,190	1,530	1,610	1,140	1,980	2,760	715	2,570	1,790	595	872
16	1,560	1,460	2,210	1,070	$1,190 \\ 1,740 \\ 1,440 \\ 583 \\ 606$	1,780	2,280	1,340	1,970	1,560	952	1,060
17	1,820	1,440	1,950	1,660		2,010	1,400	1,300	1,850	1,740	953	623
18	1,750	1,330	1,850	1,830		1,900	1,920	1,320	1,450	1,670	1,240	518
19	1,310	1,130	983	1,810		989	1,900	1,090	1,460	1,810	1,400	530
20	1,200	1,090	1,590	1,420		555	1,860	2,370	e1,660	2,190	1,280	737
21	1,080	595	2,030	1,720	2,250	1,380	2,200	2,800	e1,750	1,850	1,400	347
22	1,030	1,520	1,990	1,710	2,350	1,560	2,110	2,270	1,550	1,760	948	566
23	308	1,560	2,540	1,400	2,060	1,600	547	1,720	1,650	1,690	1,300	612
24	275	2,420	2,380	1,350	1,900	2,120	631	1,430	1,250	1,430	1,320	332
25	775	4,380	1,910	1,150	2,090	2,110	1,340	825	1,310	1,470	988	330
26 27 28 29 30 31	1,240 1,450 1,500 1,510 1,620 1,060	3,250 2,850 2,330 2,330 2,130	1,630 2,080 1,720 1,710 1,620 1,490	1,440 1,470 1,370 1,100 681 1,320	1,590 1,620 2,030  	2,040 1,320 2,810 2,450 2,310 2,250	2,360 1,940 2,080 1,520 1,270	1,530 1,380 851 763 618 1,160	449 1,330 2,180 1,550 1,290	1,360 1,680 1,440 1,350 1,230 915	820 832 892 1,700 2,040 2,700	319 749 751 797 551
TOTAL	45,308	50,301	66,123	44,512	36,078	54,995	58,258	41,122	52,269	57,655	37,300	23,096
MEAN	1,462	1,677	2,133	1,436	1,288	1,774	1,942	1,327	1,742	1,860	1,203	770
MAX	2,590	4,380	3,550	2,760	2,350	2,810	3,250	2,800	5,460	3,910	2,700	1,830
MIN	275	595	983	496	532	555	547	535	449	915	595	257
STATIST	TCS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1997 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	512	784	1,010	1,228	1,543	1,705	1,594	1,304	953	910	611	887
MAX	1,462	1,677	2,133	2,187	3,096	3,505	2,540	2,835	1,742	1,860	1,203	4,517
(WY)	(2005)	(2005)	(2005)	(1998)	(1998)	(1997)	(1998)	(2003)	(2005)	(2005)	(2005)	(2004)
MIN	153	286	554	810	794	1,063	961	676	471	409	293	176
(WY)	(1999)	(2002)	(2002)	(2000)	(2002)	(2002)	(2002)	(2001)	(2002)	(2002)	(2002)	(1999)

# 03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WAT	TER YEAR	WATER YEARS	5 1997 - 2005
ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN	564,472 1,542		567,017 1,553		1,060 1,553	2005
LOWEST ANNUAL MEAN HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM	22,500 177 556	Sep 8 Jul 11 Aug 21	5,460 257 463	Jun 13 Sep 11 Sep 20	644 22,500 74 117	2002 Sep 8, 2004 Nov 19, 2000 Oct 2, 1998
MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW			10,900 11.24 178*	Jun 13 Jun 13 Jul 27	39,000* 18.88 24*	Sep 17, 2004 Sep 17, 2004 Jun 23, 2002
10 PERCENT EXCEEDS 50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	2,480 1,240 581		2,350 1,490 744		2,090 844 189	

\* See REMARKS.e Estimated.



### 03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC-Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD .-- Water years 1997 to current year.

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: Water years 1997 to current year. DISSOLVED OXYGEN: Water years 1997 to current year.

INSTRUMENTATION .-- Water-quality monitor since May 1997.

REMARKS.--Interruptions in the data are due to malfunctions of the monitor. Data were collected during the current year for the months of October 2004, May through September 2005.

EXTREMES FOR PERIOD OF DAILY RECORD .--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
WATER TEMPERATURE, °C	24.9, August 14, 2002	6.8, June 2, 2001
DISSOLVED OXYGEN, mg/L	12.4, September 17, 2004	3.1, November 1, 1998

# EXTREMES FOR CURRENT YEAR .--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
WATER TEMPERATURE, °C	23.3, August 24	14.1, May 13, 14
DISSOLVED OXYGEN, mg/L	11.5, May 29	6.0, August 28

# TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	(	OCTOBE	ર	Ν	OVEMBE	ER	D	ECEMBE	R	J	JANUAR	Y
1	16.2	16.0	16.1									
2	16.6	16.0	16.2									
3	16.4	16.1	16.3									
4	16.2	15.9	16.1									
5	16.1	15.9	16.0									
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22 23												
23												
24												
25												
26												
27												
28												
29												
30												
31												
MONTH												

# 03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC-Continued

# TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		EBRUAR			MARCH			APRIL			MAY	
1												
$\frac{2}{3}$												
4												
5												
6												
7 8												
9												
10												
11												
12 13										15.0	 14.1	14.5
13										15.7	14.1	15.1
15										15.8	14.8	15.3
16										16.1	14.9	15.6
17 18										16.6 16.9	15.1 15.6	15.9 16.4
19										17.0	16.1	16.7
20										17.0	16.3	16.8
21										17.1	16.5	16.9
22 23										17.2 17.3	16.1 16.3	16.8 16.9
23 24										17.3	16.4	16.9
25										17.0	15.1	16.0
26										17.0	15.2	16.4
27										17.0	15.5	16.4
28 29										16.9 16.6	15.9 15.5	16.4 16.0
30										17.0	15.7	16.3
31										16.8	16.1	16.5
MONTH												
MONTH		 JUNE			JULY			 AUGUST			 EPTEMBE	 ER
1	16.9	JUNE 16.3	16.6	20.7	JULY 19.8	20.3	22.6	AUGUST 21.4	22.1	SI 21.4	EPTEMBE 20.6	21.1
1 2	16.9 17.2	JUNE 16.3 16.2	16.6 16.8	20.7 20.9	JULY 19.8 20.0	20.3 20.5	22.6 22.4	AUGUST 21.4 20.9	22.1 21.8	Si 21.4 21.2	EPTEMBE 20.6 20.6	21.1 21.0
1 2 3 4	16.9 17.2 17.1 17.0	JUNE 16.3 16.2 16.3 16.2	16.6 16.8 16.7 16.7	20.7 20.9 20.9 21.1	JULY 19.8 20.0 20.2 20.4	20.3 20.5 20.7 20.8	22.6 22.4 22.5 22.7	AUGUST 21.4 20.9 21.4 21.8	22.1 21.8 22.1 22.3	Si 21.4 21.2 21.2 21.3	EPTEMBE 20.6 20.6 20.5 20.1	21.1 21.0 20.9 20.7
1 2 3	16.9 17.2 17.1	JUNE 16.3 16.2 16.3	16.6 16.8 16.7	20.7 20.9 20.9	JULY 19.8 20.0 20.2	20.3 20.5 20.7	22.6 22.4 22.5	AUGUST 21.4 20.9 21.4	22.1 21.8 22.1	21.4 21.2 21.2	EPTEMBE 20.6 20.6 20.5	21.1 21.0 20.9
1 2 3 4 5 6	16.9 17.2 17.1 17.0 17.1 19.0	JUNE 16.3 16.2 16.3 16.2 16.6 16.8	16.6 16.8 16.7 16.7 16.9 17.6	20.7 20.9 20.9 21.1 21.1 21.1	JULY 19.8 20.0 20.2 20.4 20.2 20.5	20.3 20.5 20.7 20.8 20.7 20.8	22.6 22.4 22.5 22.7 22.8 22.8	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7	22.1 21.8 22.1 22.3 22.4 22.4	St 21.4 21.2 21.2 21.3 20.9 20.8	20.6 20.6 20.5 20.1 20.0 20.1	21.1 21.0 20.9 20.7 20.5 20.6
1 2 3 4 5 6 7	16.9 17.2 17.1 17.0 17.1 19.0 17.8	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9	16.6 16.8 16.7 16.7 16.9 17.6 17.4	20.7 20.9 20.9 21.1 21.1 21.1 20.9	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3	20.3 20.5 20.7 20.8 20.7 20.8 19.5	22.6 22.4 22.5 22.7 22.8 22.8 22.8 22.6	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0	22.1 21.8 22.1 22.3 22.4 22.4 22.2	State	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0	21.1 21.0 20.9 20.7 20.5 20.6 20.5
1 2 3 4 5 6 7 8 9	16.9 17.2 17.1 17.0 17.1 19.0	JUNE 16.3 16.2 16.3 16.2 16.6 16.8	16.6 16.8 16.7 16.7 16.9 17.6	20.7 20.9 20.9 21.1 21.1 21.1	JULY 19.8 20.0 20.2 20.4 20.2 20.5	20.3 20.5 20.7 20.8 20.7 20.8	22.6 22.4 22.5 22.7 22.8 22.8	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7	22.1 21.8 22.1 22.3 22.4 22.4	St 21.4 21.2 21.2 21.3 20.9 20.8	20.6 20.6 20.5 20.1 20.0 20.1	21.1 21.0 20.9 20.7 20.5 20.6
1 2 3 4 5 6 7 8	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6	20.7 20.9 21.9 21.1 21.1 21.1 20.9 19.3	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8	22.6 22.4 22.5 22.7 22.8 22.8 22.6 22.5	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 20.0	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.5
1 2 3 4 5 6 7 8 9 10 11	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5	JUNE 16.3 16.2 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0	20.7 20.9 20.9 21.1 21.1 20.9 19.3 18.9 19.4 19.8	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6	22.6 22.4 22.5 22.7 22.8 22.8 22.6 22.5 22.3 22.4 22.5	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3	22.1 21.8 22.1 22.3 22.4 22.4 22.4 22.2 22.1 21.8 21.9 22.0	Si 21.4 21.2 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.7 20.9 21.1	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.5 20.4 20.4 20.4
1 2 3 4 5 6 7 8 9 10 11 12	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5	20.7 20.9 20.9 21.1 21.1 21.1 20.9 19.3 18.9 19.4 19.8 19.9	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6	22.6 22.4 22.5 22.7 22.8 22.8 22.6 22.5 22.3 22.4 22.5 22.5	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.5	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0	Si 21.4 21.2 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.7 20.9 20.8 20.7 20.9 20.8 20.7 20.9	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.4 20.4 20.4 20.5 20.3
1 2 3 4 5 6 7 8 9 10 11 12 13 14	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4	20.7 20.9 20.9 21.1 21.1 21.1 20.9 19.3 18.9 19.4 19.8 19.9 19.9 19.9	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4 19.4	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.5 22.9 23.0	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.5 21.8 21.6	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.3 22.2	Si 21.4 21.2 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 20.8 20.9	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.0 19.8 20.1 20.0	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.4 20.4 20.4 20.5 20.3 20.5 20.5
1 2 3 4 5 6 7 8 9 10 11 12 13	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8	20.7 20.9 20.9 21.1 21.1 21.1 20.9 19.3 18.9 19.4 19.8 19.9 19.9	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.5 22.5 22.9	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.5 21.8	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.3	St 21.4 21.2 21.2 21.3 20.9 20.8 20.9 20.8 20.7 20.9 21.1 20.9 21.1 20.9 20.8	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.5 20.4 20.4 20.4 20.5 20.3 20.5
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5	20.7  20.9  20.9  21.1  21.1  21.1  20.9  19.3  18.9  19.4  19.8  19.9  19.9  19.9  19.9  19.9  19.9  20.0  20.0  20.9  20.9  20.9  20.9  21.1  21.1  20.9  20.9  20.9  20.9  21.1  20.9  20.9  20.9  21.1  20.9  20.9  20.9  20.9  20.9  20.9  20.9  20.1  20.9  20.0	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4 19.4 19.3 19.5	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.7 19.8	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.9 23.0 22.8 22.9	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.3 22.2 22.2 22.2 22.4	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.7 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.0 21.0 21.0 21.2 21.2 21.3 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9	EPTEMBE 20.6 20.5 20.1 20.0 20.0 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 20.2 20.4	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.5 20.4 20.4 20.4 20.5 20.3 20.5 20.5 20.6 20.5 20.6 20.7
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.8\\ 19.9\\ 19.8\\ 19.9\\ 20.0\\ 20.4\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.5 18.3 19.3 19.3 19.4 19.4 19.4 19.4 19.5 19.6	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.9 23.0 22.8 22.9 23.0 22.8 22.9 22.9	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2	22.1 21.8 22.1 22.3 22.4 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.3 22.2 22.2	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.7 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.0 21.0	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 20.2 20.4 20.5	21.1 21.0 20.9 20.7 20.5 20.6 20.5 20.4 20.4 20.4 20.4 20.5 20.5 20.5 20.5 20.5 20.6 20.5 20.6 20.7 20.8
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.4	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.8\\ 19.9\\ 19.8\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.4 19.4 19.4 19.3 19.5 19.6 17.9 17.8	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 20.0	22.6 22.4 22.5 22.7 22.8 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.5 22.9 23.0 22.8 22.9 23.0 22.8 22.9 22.9 22.9 22.9 22.9 22.9 22.9	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.8 21.6 21.7 21.9 21.2 21.7 21.8 21.3 21.3 21.5 21.8 21.6 21.7 21.8 21.9 21.7 21.8 21.9 21.7 20.0 21.6 21.7 21.8 21.8 21.8 21.7 21.8 21.8 21.8 21.8 21.8 21.7 21.8 21.8 21.7 21.8 21.8 21.7 21.8 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.9 22.2 21.7 20.8	22.1 21.8 22.1 22.3 22.4 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.2 22.2 22.2 22	Si 21.4 21.2 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.7 20.9 20.8 20.7 20.9 20.8 20.7 20.9 20.8 20.9 21.0 21.0 21.2 21.2 21.4	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.1 20.0 19.9 19.9 20.0 20.2 20.4 20.5 20.1 20.1 20.0 20.1 20.0 20.1 20.0 20.0 20.1 20.0 20.0 20.0 20.0 20.1 20.0 20.1 20.0 20.1 20.0 20.1 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ \end{array}$ $\begin{array}{c} 20.6\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ 20.5\\ 20.3\\ 20.5\\ 20.5\\ 20.6\\ \end{array}$ $\begin{array}{c} 20.7\\ 20.8\\ 20.6\\ 20.7\\ \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1	JUNE 16.3 16.2 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4 19.4 19.3 19.4 19.5 19.6 17.9	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.5 22.9 23.0 22.8 22.9 22.9 22.9 22.9 22.7	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7	22.1 21.8 22.1 22.3 22.4 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.3 22.2 22.2 22.2 22.2 22.4 22.4 22.6 22.4	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 21.1 20.9 21.2 21.2 21.2 21.3 20.9 20.8 20.9 21.2 21.2 21.3 20.9 20.8 20.9 20.8 20.9 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.2 21.3 20.9 20.8 20.9 21.1 20.9 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.5 21.2	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 19.9 20.0 19.9 20.0 20.1 20.0 20.1 20.0 20.0 20.1 20.0 20.0 20.1 20.0 20.0 20.1 20.0 20.0 20.1 20.0 20.0 20.1 20.0 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ 20.6\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ 20.5\\ 20.3\\ 20.5\\ 20.5\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4	JUNE 16.3 16.2 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7 18.8 18.7 18.8 18.7 18.8 18.7	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.8\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4 19.3 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.5 19.6 17.9 17.8 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.5 19.6 17.9 17.8 19.4 19.5 19.6 17.9 17.8 19.4 19.5 19.6 17.9 17.8 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.4 19.5 19.6 19.5 19.4 19.5 19.6 19.4 19.5 19.6 19.5 19.4 19.5 19.6 19.5 19.4 19.5 19.6 19.4 19.5 19.6 19.4 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.5 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.5 19.6 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.4 19.5 19.6 19.4 19.5 19.4 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 20.0 20.4	22.6 22.4 22.5 22.7 22.8 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.9 23.0 22.8 22.9 22.9 22.9 22.9 22.9 22.9 22.7 22.5 22.6 22.9 22.9 22.7 22.5 22.6 23.0	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.9 21.2 21.7 22.0 21.6 21.7 21.8 21.9 21.7 22.0 21.6 21.7 21.8 21.9 21.7 22.0 21.6 21.7 21.8 21.9 21.7 22.0 21.6 21.7 21.8 21.9 21.7 22.0 21.6 21.7 21.8 21.9 21.7 22.0 21.6 21.7 21.8 21.9 21.7 20.0 21.6 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.8 21.7 21.8 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.8 21.7 21.9 22.2 21.7 20.8 21.6 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.8	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.3 22.2 22.2 22.2	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.7 20.9 21.1 20.9 21.1 20.9 21.2 21.0 21.0 21.0 21.0 21.0 21.2 21.4 21.2 21.4 21.2 21.3 20.9 20.8 20.9 21.1 20.9 21.0 21.0 21.0 21.0 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.2 21.4 21.4 21.4 21.4 21.4 21.4 21.4	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.4 20.4 20.4 20.4	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ \hline \\ 20.6\\ 20.5\\ 20.4\\ 20.4\\ \hline \\ 20.4\\ 20.4\\ \hline \\ 20.5\\ 20.5\\ 20.5\\ 20.5\\ 20.6\\ \hline \\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ \hline \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7 18.8 18.3 17.9 17.8	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 21.3\\ 19.3\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.8\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.5 19.3 19.4 19.4 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.6 19.2 19.5 19.6 19.3 19.5 19.6 19.3 19.5 19.6 19.3 19.5 19.6 19.5 19.6 19.8 20.2 20.2 20.2 20.5 18.3 18.5 19.3 19.3 19.4 19.5 19.6 19.5 19.6 19.8 20.2 19.5 19.6 19.4 19.5 19.6 19.5 19.6 19.8 20.2 19.8 19.4 19.3 19.5 19.6 19.8 19.4 19.4 19.5 19.6 19.8 19.4 19.4 19.5 19.8 19.4 19.4 19.5 19.5 19.6 19.8 19.4 19.4 19.5 19.5 19.6 19.8 20.2 20.5 19.8 19.4 19.5 19.5 19.6 19.8 20.2 19.8 19.4 19.4 19.4 19.5 19.6 19.8 20.2 10.5 19.8 20.2 10.5	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 20.0 19.8 19.1 20.0 20.4 20.8	22.6 22.4 22.5 22.7 22.8 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.9 23.0 22.8 22.9 22.9 22.9 22.9 22.9 22.9 22.9	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 21.9 22.2 21.7 20.9 21.4 21.9 21.7 21.9 21.6 21.3 21.5 21.8 21.6 21.7 21.8 21.9 21.6 21.7 21.8 21.9 21.6 21.7 21.8 21.9 21.7 21.8 21.9 21.7 21.8 21.9 21.7 21.8 21.9 21.7 21.8 21.3 21.5 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.5 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.8 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.6 21.7 20.8 21.7 20.8 21.7 20.8 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 22.1 22.2	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.2 22.2 22	Si 21.4 21.2 21.2 21.3 20.9 20.8 20.9 21.0 21.0 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.5 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.4 21.5 21.5 21.4 21.5 21.5 21.4 21.5 21	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.4 20.1 20.4 20.4 20.5	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ \end{array}$ $\begin{array}{c} 20.6\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ \end{array}$ $\begin{array}{c} 20.5\\ 20.3\\ 20.5\\ 20.5\\ 20.6\\ \end{array}$ $\begin{array}{c} 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3 18.6 18.8	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1 17.6 17.9	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7 18.8 18.3 17.9 17.8 18.2 18.4	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.5 19.3 19.3 19.3 19.4 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.5 19.4 19.5 19.4 19.5 19.5 19.4 19.4 19.5 19.5 19.4 19.5 19.5 19.5 19.4 19.5 19.5 19.5 19.4 19.5 1	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 20.0 19.8 19.1 20.0 20.4 20.0 20.4 20.8	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.9 23.0 22.8 22.9 23.0 22.8 22.9 22.9 22.9 22.7 22.5 22.6 23.0 22.9 22.7 22.5 22.6 23.0 22.9 23.1 23.3	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 20.9 21.2 21.2 21.2 22.2 22.2 22.2	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 21.3 20.9 21.3 20.9 21.3 20.9 20.8 20.9 21.3 20.9 21.3 20.9 20.8 20.9 21.3 20.9 20.8 20.9 21.3 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 21.1 20.9 21.1 20.9 21.1 20.9 21.1 20.9 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.2 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.0 19.9 19.9 20.0 20.0 19.9 20.0 20.0 19.9 20.0 20.0 19.9 20.0 20.0 20.0 19.9 20.0 20.1 20.0 20.1 20.0 20.1 20.0 20.1 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.5 20.6 20.6 20.6 20.6 20.6 20.6 20.4 20.4 20.5 20.6 20.6 20.6 20.6 20.6 20.4 20.5 20.6 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ 20.5\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ 20.4\\ 20.5\\ 20.3\\ 20.5\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ 20.9\\ 20.9\\ 21.0\\ 21.0\\ 21.0\\ \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3 18.6	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1 17.6 17.9 18.1	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7 18.8 18.3 17.9 17.8 18.2	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ 22.2\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4 19.4 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.8 20.2 20.3 20.5 20.9	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 19.1 20.0 20.4 20.8 21.1 21.3 21.6	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.9 23.0 22.8 22.9 23.0 22.8 22.9 22.9 22.9 22.7 22.5 22.6 22.9 22.7 22.5 22.6 22.9 23.0 22.9 23.1	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 21.9 22.2 21.7 20.9 21.4 21.9 21.4 21.9 21.4 21.9 21.4 21.9 21.7 22.0 21.6 21.3 21.3 21.5 21.8 21.6 21.7 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.5 21.8 21.6 21.7 21.8 21.9 21.7 21.8 21.3 21.5 21.8 21.6 21.7 22.0 21.6 21.7 21.8 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.8 21.6 21.7 21.8 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 22.0 21.6 21.7 21.8 21.6 21.7 22.2 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 21.7 20.8 21.6 22.1 22.2 22.2 22.2	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.3 22.2 22.2 22.2 22.2 22.2	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.3 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.5 21.2 21.4 21.5 21.2 21.4 21.5 21.2 21.4 21.5 21.2	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.0 19.9 20.0 19.9 20.0 20.2 20.4 20.5 20.1 20.4 20.5 20.1 20.4 20.5 20.6 20.5 20.1 20.0 20.1 20.0 20.1 20.0 20.1 20.1 20.0 20.2 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.5 20.6 20.6 20.6 20.6 20.4 20.4 20.5 20.6 20.6 20.6 20.6 20.6 20.4 20.6 20.4 20.5 20.6 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ \end{array}$ $\begin{array}{c} 20.6\\ 20.5\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ \end{array}$ $\begin{array}{c} 20.5\\ 20.5\\ 20.5\\ 20.5\\ 20.5\\ 20.6\\ \end{array}$ $\begin{array}{c} 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\\26\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3 18.6 18.8 19.0 19.4	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.4 18.0 16.5 17.1 17.6 17.9 18.1 18.5	16.6 16.8 16.7 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7 18.8 18.3 17.9 17.8 18.2 18.4 18.6 19.0	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ 22.2\\ 22.2\end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.5 19.3 19.3 19.3 19.3 19.4 19.4 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.4 19.5 19.4 19.4 19.5 19.4 19.4 19.5 19.4 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.5 19.4 19.5 19.4 19.5 19.5 19.5 19.5 20.2 20.3 20.5 20.9 21.3	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 19.1 20.0 20.4 20.0 20.4 20.0 21.1 21.3 21.6 21.8	22.6 22.4 22.5 22.7 22.8 22.6 22.5 22.3 22.4 22.5 22.5 22.5 22.9 23.0 22.8 22.9 23.0 22.8 22.9 22.9 22.7 22.5 22.6 23.0 22.9 22.7 22.5 22.6 23.0 22.9 23.1 23.3 23.1 23.0	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 20.9 22.2 21.6 21.7 21.9 22.2 22.2 22.2 22.6 22.1	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.5 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 21.0 21.2 21.2 21.4 21.4 21.2 21.4 21.4 21.2	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.0 19.9 19.9 20.0 20.0 19.9 20.0 19.9 20.0 20.0 19.9 20.0 20.1 20.0 20.0 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.4 20.6 20.8 20.6 20.8 20.6 20.8 20.6 20.8 20.8 20.6 20.8 20.6 20.8 20.8 20.8 20.6 20.8 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ \end{array}$ $\begin{array}{c} 20.6\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ \end{array}$ $\begin{array}{c} 20.5\\ 20.5\\ 20.5\\ 20.5\\ 20.5\\ 20.6\\ \end{array}$ $\begin{array}{c} 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ 21.0\\ 21.0\\ 21.0\\ 21.0\\ \end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\\26\\27\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3 18.6 18.8 19.0 19.4 19.4	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1 17.6 17.9 18.1 18.5 18.5	16.6 16.8 16.7 16.9 17.6 17.4 17.6 18.1 18.5 19.0 19.5 19.8 18.4 18.3 18.5 18.8 18.7 18.8 18.3 17.9 17.8 18.2 18.4 18.6 19.0 18.9	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ 22.2\\ 22.5\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3 19.3 19.4 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.4 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.4 19.5 19.5 19.5 19.4 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19.4 19.5 19.5 19.5 19.5 19.4 19.5 1	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 19.1 20.0 20.4 20.8 21.1 21.3 21.6 21.8 22.2	$\begin{array}{c} 22.6\\ 22.4\\ 22.5\\ 22.7\\ 22.8\\ 22.8\\ 22.6\\ 22.5\\ 22.3\\ 22.4\\ 22.5\\ 22.5\\ 22.9\\ 23.0\\ 22.8\\ 22.9\\ 22.9\\ 22.7\\ 22.5\\ 22.6\\ 23.0\\ 22.9\\ 23.1\\ 23.3\\ 23.1\\ 23.0\\ 22.9\end{array}$	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 20.8 21.7 20.9 22.2 21.7 20.8 21.6 21.7 20.9 22.2 22.2 22.2 22.6 22.1 22.2	22.1 21.8 22.1 22.3 22.4 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.0 22.0 22	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 21.8 20.9 21.0 21.0 21.5 21.2 21.4 21.2 21.4 21.4 21.4 21.4 21.4 21.4	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 19.8 20.1 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.4 20.5 20.1 20.4 20.5 20.1 20.0 20.2 20.4 20.5 20.1 20.0 20.4 20.4 20.5 20.6 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.7 20.8 20.7 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.7 20.8 20.8 20.8 20.7 20.8 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ 20.6\\ 20.5\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ 20.4\\ 20.5\\ 20.3\\ 20.5\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ 21.0\\$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\\26\\27\\28\\29\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3 18.6 18.8 19.0 19.4 19.4 19.4 19.4 19.7 20.3	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1 17.6 17.9 18.1 18.5 18.5 19.0 19.0	$\begin{array}{c} 16.6\\ 16.8\\ 16.7\\ 16.7\\ 16.9\\ 17.6\\ 17.6\\ 17.6\\ 17.6\\ 18.1\\ 18.5\\ 19.0\\ 19.5\\ 19.8\\ 18.4\\ 18.3\\ 18.5\\ 18.8\\ 18.7\\ 18.8\\ 18.3\\ 17.9\\ 17.8\\ 18.2\\ 18.4\\ 18.6\\ 19.0\\ 18.9\\ 19.4\\ 19.6\\ \end{array}$	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ 22.2\\ 22.5\\ 22.6\\ 22.7\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.4 19.3 19.4 19.3 19.4 19.3 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.3 20.2 20.3 20.5 20.9 21.3 21.7 21.8 21.9	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 19.1 20.0 20.4 20.8 21.1 21.3 21.6 21.8 22.2 22.3 22.4	$\begin{array}{c} 22.6\\ 22.4\\ 22.5\\ 22.7\\ 22.8\\ 22.6\\ 22.5\\ 22.3\\ 22.4\\ 22.5\\ 22.9\\ 23.0\\ 22.8\\ 22.9\\ 22.9\\ 22.7\\ 22.5\\ 22.6\\ 23.0\\ 22.9\\ 23.1\\ 23.3\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\$	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 22.0 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 22.2 21.7 20.8 21.6 21.7 22.2 22.2 22.2 22.2 22.2 22.6 22.1 22.2 22.0 22.2 22.2 22.2 22.2 22.0 22.2 22.0 22.2 22.2 22.0	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.2 22.2 22	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.0 21.0 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.3 20.9 20.8 20.9 20.9 20.8 20.9 20.8 20.9 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.0 21.2 21.4 21.4 21.3	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 20.2 20.4 20.4 20.5 20.1 20.1 20.4 20.5 20.1 20.4 20.5 20.1 20.4 20.5 20.1 20.1 20.0 20.0 19.9 19.9 20.0 20.4 20.5 20.1 20.4 20.5 20.6 20.6 20.8 20.8 20.7 20.6 20.8 20.8 20.7 20.6 20.9 20.6 20.8 20.8 20.7 20.6 20.8 20.8 20.7 20.6 20.9 20.8 20.8 20.8 20.7 20.6 20.9 20.6 20.9 20.9 20.8 20.9 20.8 20.9 20.9 20.8 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.0 20.9 20.0 20.6 20.9 20.0 20.9 20.0 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ 20.6\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ 20.4\\ 20.5\\ 20.3\\ 20.5\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ 21.0\\ 21.0\\ 21.0\\ 21.0\\ 21.0\\ 21.1\\ 21.1\end{array}$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\\26\\27\\28\\29\\30\end{array} $	$\begin{array}{c} 16.9\\ 17.2\\ 17.1\\ 17.0\\ 17.1\\ 19.0\\ 17.8\\ 17.9\\ 18.7\\ 19.1\\ 19.5\\ 19.9\\ 20.9\\ 19.4\\ 18.5\\ 18.7\\ 19.0\\ 19.4\\ 18.5\\ 18.6\\ 18.4\\ 18.6\\ 18.8\\ 19.0\\ 19.4\\ 19.4\\ 19.7\\ 20.3\\ 20.4\\ \end{array}$	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1 17.6 17.9 18.1 18.5 18.5 19.0 19.0 19.0 19.3	$\begin{array}{c} 16.6\\ 16.8\\ 16.7\\ 16.7\\ 16.7\\ 16.9\\ 17.6\\ 17.4\\ 17.6\\ 18.1\\ 18.5\\ 19.0\\ 19.5\\ 19.8\\ 18.4\\ 18.3\\ 18.5\\ 18.8\\ 18.3\\ 17.9\\ 17.8\\ 18.3\\ 17.9\\ 17.8\\ 18.2\\ 18.4\\ 18.6\\ 19.0\\ 18.9\\ 19.4\\ 19.6\\ 19.9\\ 19.4\\ 19.6\\ 19.9\\ \end{array}$	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ 22.2\\ 22.5\\ 22.6\\ 22.7\\ 22.7\\ 22.7\end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.3 19.4 19.3 19.4 19.3 19.4 19.3 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.4 19.5 19.4 19.5 19.6 17.9 17.8 19.4 19.4 19.5 19.5 19.5 19.4 19.5 19.5 19.5 20.9 21.3 21.7 21.8 21.9 21.8	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 19.1 20.0 20.4 20.4 20.8 21.1 21.3 21.6 21.8 22.2 22.3 22.4 22.3	$\begin{array}{c} 22.6\\ 22.4\\ 22.5\\ 22.7\\ 22.8\\ 22.8\\ 22.6\\ 22.5\\ 22.3\\ 22.4\\ 22.5\\ 22.9\\ 23.0\\ 22.8\\ 22.9\\ 23.0\\ 22.8\\ 22.9\\ 22.7\\ 22.5\\ 22.6\\ 23.0\\ 22.9\\ 23.1\\ 23.3\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\$	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 20.9 22.2 21.7 20.8 21.6 21.7 20.9 22.2 21.7 20.8 21.6 21.7 20.9 22.2 21.7 20.8 21.6 21.7 20.9 22.2 22.2 22.2 22.2 22.6 22.1 22.2 22.0 22.3 22.0	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.2 22.2 22.2 22	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.5 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.0 21.0 21.0 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.3 21.4	EPTEMBE 20.6 20.5 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 20.2 20.4 20.5 20.1 20.0 20.2 20.4 20.5 20.1 20.0 20.2 20.4 20.5 20.1 20.0 20.0 19.9 20.0 20.0 20.0 19.9 20.0 20.4 20.4 20.5 20.6 20.8 20.7 20.6 20.8 20.7 20.6 20.8 20.9 20.3 20.9 20.3 20.9 20.3 20.5 20.9 20.3 20.5 20.6 20.9 20.3 20.5 20.5 20.5 20.5 20.6 20.9 20.3 20.5 20.5 20.5 20.6 20.9 20.3 20.5 20.5 20.5 20.6 20.9 20.3 20.5 20.5 20.5 20.6 20.9 20.3 20.5 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ \end{array}$ $\begin{array}{c} 20.6\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ \end{array}$ $\begin{array}{c} 20.5\\ 20.3\\ 20.5\\ 20.5\\ 20.6\\ \end{array}$ $\begin{array}{c} 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ 21.0\\ 21$
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\\26\\27\\28\\29\end{array} $	16.9 17.2 17.1 17.0 17.1 19.0 17.8 17.9 18.7 19.1 19.5 19.9 20.9 19.4 18.5 18.7 19.0 19.1 19.3 18.6 18.4 18.3 18.6 18.8 19.0 19.4 19.4 19.4 19.4 19.7 20.3	JUNE 16.3 16.2 16.3 16.2 16.6 16.8 16.9 17.0 17.4 17.7 18.1 18.8 18.3 18.0 18.2 18.1 18.2 18.2 18.4 18.0 16.5 17.1 17.6 17.9 18.1 18.5 18.5 19.0 19.0	$\begin{array}{c} 16.6\\ 16.8\\ 16.7\\ 16.7\\ 16.9\\ 17.6\\ 17.6\\ 17.6\\ 17.6\\ 18.1\\ 18.5\\ 19.0\\ 19.5\\ 19.8\\ 18.4\\ 18.3\\ 18.5\\ 18.8\\ 18.7\\ 18.8\\ 18.3\\ 17.9\\ 17.8\\ 18.2\\ 18.4\\ 18.6\\ 19.0\\ 18.9\\ 19.4\\ 19.6\\ \end{array}$	$\begin{array}{c} 20.7\\ 20.9\\ 20.9\\ 21.1\\ 21.1\\ 21.1\\ 21.1\\ 20.9\\ 19.3\\ 18.9\\ 19.4\\ 19.8\\ 19.9\\ 19.4\\ 19.8\\ 19.9\\ 19.9\\ 19.9\\ 19.9\\ 20.0\\ 20.4\\ 20.2\\ 19.9\\ 20.5\\ 20.9\\ 21.2\\ 21.6\\ 21.9\\ 22.2\\ 22.5\\ 22.6\\ 22.7\\ \end{array}$	JULY 19.8 20.0 20.2 20.4 20.2 20.5 18.3 18.5 18.3 18.6 19.3 19.4 19.3 19.4 19.3 19.4 19.3 19.4 19.3 19.5 19.6 17.9 17.8 19.4 19.4 19.3 20.2 20.3 20.5 20.9 21.3 21.7 21.8 21.9	20.3 20.5 20.7 20.8 20.7 20.8 19.5 18.8 18.6 19.0 19.6 19.6 19.6 19.6 19.6 19.6 19.7 19.8 20.0 19.8 19.1 20.0 20.4 20.8 21.1 21.3 21.6 21.8 22.2 22.3 22.4	$\begin{array}{c} 22.6\\ 22.4\\ 22.5\\ 22.7\\ 22.8\\ 22.6\\ 22.5\\ 22.3\\ 22.4\\ 22.5\\ 22.9\\ 23.0\\ 22.8\\ 22.9\\ 22.9\\ 22.7\\ 22.5\\ 22.6\\ 23.0\\ 22.9\\ 23.1\\ 23.3\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 22.9\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.0\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\ 23.1\\ 23.0\\ 23.1\\$	AUGUST 21.4 20.9 21.4 21.8 21.9 21.7 22.0 21.6 21.3 21.3 21.3 21.3 21.3 21.5 21.8 21.6 21.7 21.9 22.2 21.7 20.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 22.0 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 21.8 21.6 21.7 22.2 21.7 20.8 21.6 21.7 22.2 22.2 22.2 22.2 22.2 22.6 22.1 22.2 22.0 22.2 22.2 22.2 22.2 22.0 22.2 22.0 22.2 22.2 22.0	22.1 21.8 22.1 22.3 22.4 22.4 22.2 22.1 21.8 21.9 22.0 22.0 22.0 22.0 22.0 22.2 22.2 22	Si 21.4 21.2 21.3 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.0 21.0 21.2 21.4 21.2 21.4 21.2 21.4 21.2 21.4 21.3 20.9 20.8 20.9 20.9 20.8 20.9 20.8 20.9 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.1 20.9 20.8 20.9 21.0 21.0 21.0 21.2 21.4 21.4 21.3	EPTEMBE 20.6 20.5 20.1 20.0 20.1 20.0 20.0 19.9 19.9 20.0 19.8 20.1 20.0 20.2 20.4 20.4 20.5 20.1 20.1 20.4 20.5 20.1 20.4 20.5 20.1 20.4 20.5 20.1 20.1 20.0 20.0 19.9 19.9 20.0 20.4 20.5 20.1 20.4 20.5 20.6 20.6 20.8 20.8 20.7 20.6 20.8 20.8 20.7 20.6 20.9 20.6 20.8 20.8 20.7 20.6 20.8 20.8 20.7 20.6 20.9 20.8 20.8 20.8 20.7 20.6 20.9 20.6 20.9 20.9 20.8 20.9 20.8 20.9 20.9 20.8 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.9 20.0 20.9 20.0 20.6 20.9 20.0 20.9 20.0 20.	$\begin{array}{c} 21.1\\ 21.0\\ 20.9\\ 20.7\\ 20.5\\ 20.6\\ 20.5\\ 20.4\\ 20.4\\ 20.4\\ 20.4\\ 20.5\\ 20.3\\ 20.5\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.6\\ 20.7\\ 20.8\\ 20.9\\ 21.0\\ 21.0\\ 21.0\\ 21.0\\ 21.0\\ 21.1\\ 21.1\end{array}$

# 03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER	ł	ľ	NOVEMBE	R	D	DECEMBE	R		JANUARY	ſ
1	9.2	9.0	9.1									
2 3	9.2 9.4	8.8 9.0	9.1 9.2									
4	9.4 9.0	9.0 8.7	9.2 8.9									
5	9.0	8.7	8.8									
6												
7												
8												
9												
10												
11												
12 13												
13												
15												
16												
10												
18												
19												
20												
21												
22 23												
23 24												
25												
26												
20												
28												
29 30												
30												
MONTH												
		FEBRUAR	Y		MARCH			APRIL			MAY	
1												
$\frac{2}{3}$												
4												
5												
6												
7												
8 9												
10												
11 12												
13												
14												
15												
16												
17										9.6	8.2	8.8
18 19										10.3 10.6	8.4 8.9	9.4 9.8
20										9.8	8.4	9.1
21 22										10.1 10.4	8.5 9.0	9.3 9.8
23										10.4	9.0	9.7
24										10.6	9.0	9.9
25										11.2	9.5	10.4
26										10.9	9.5	10.2
27 28										11.2 11.0	9.3 9.3	10.2 10.2
										1 1 11		1117
29												
29 30										11.5 11.4	9.5 9.6	10.6 10.6
										11.5	9.5	10.6
30										11.5 11.4	9.5 9.6	10.6 10.6

# 03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC-Continued

# DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY				AUGUST	,	S	EPTEMBE	ER
1 2 3 4 5	9.3 9.3 9.5 8.9 9.0	8.6 8.4 8.3 8.3 8.3	8.9 8.8 8.7 8.6 8.5	7.8 8.0 7.9 8.2 8.0	7.1 7.1 7.0 7.1 7.1	7.4 7.4 7.4 7.4 7.5	8.2 8.1 8.1 7.8 7.9	7.5 7.1 7.1 6.8 6.8	7.9 7.7 7.5 7.3 7.2	7.8 8.0 8.0 8.1 8.3	7.3 7.3 7.4 7.4 7.5	7.5 7.5 7.6 7.7 7.7
6 7 8 9 10	9.1 9.3 9.9 10.0 9.3	8.2 8.3 8.4 8.5 8.5	8.6 8.6 8.8 8.8 8.8	7.8 8.8 8.4 8.2 8.4	7.2 7.2 8.1 8.0 8.1	7.4 8.0 8.3 8.1 8.2	8.2 7.9 7.7 8.1 7.9	6.8 6.9 7.3 7.2	7.2 7.4 7.3 7.6 7.5	8.4 8.3 8.5 8.5 8.7	7.5 7.5 7.6 7.5	7.8 7.8 7.9 7.9 7.9
11 12 13 14 15	8.9 8.8 9.0 9.1 8.7	8.3 8.1 8.1 8.2 8.2	8.6 8.4 8.6 8.8 8.4	8.3 8.5 8.5 8.6 9.3	8.1 8.1 8.2 8.2	8.2 8.3 8.3 8.4 8.5	8.0 8.4  8.6 	6.9 6.5  6.9	7.4 7.5 7.5 	8.9 8.6 7.5 8.2 8.2	7.8 6.9 7.0 7.1 7.1	8.2 7.8 7.2 7.5 7.4
16 17 18 19 20	8.4 8.4 8.6 8.8 8.7	8.1 8.1 8.0 8.0 8.0	8.2 8.2 8.2 8.3 8.3	9.0 8.9  	8.3 8.1  	8.6 8.5  	 7.8 8.6 7.7	7.0 6.6 6.7	 7.2 7.4 7.2	8.0 8.3 8.5 8.7 8.3	7.0 7.3 7.3 7.3 6.9	7.4 7.7 7.8 7.7 7.5
21 22 23 24 25	9.2 9.1 9.0 8.9	8.3 8.2 8.1 7.8	8.6 8.5 8.4 8.4	8.7 8.6 8.8 8.6	8.1 7.9 7.9 7.8	8.4 8.2 8.3 8.2	7.2 7.3 7.3 7.8 7.7	6.6 6.7 6.6 6.7 6.6	6.9 7.0 6.9 7.0 7.0	8.2 8.6 8.2 8.4 8.2	7.0 6.9 6.8 7.1 7.1	7.6 7.4 7.2 7.6 7.6
26 27 28 29 30 31	7.7 8.0 8.1	7.3 7.2 7.1	7.5 7.6 7.5	8.8 8.3 8.3 8.4 8.6 8.8	7.8 7.7 7.6 7.6 7.4 7.6	8.1 7.9 7.9 7.8 7.9 8.1	7.8 7.3 7.7 6.8 7.1 7.4	6.5 6.6 6.0 6.2 6.4 6.9	6.9 6.8 6.9 6.4 6.6 7.2	7.8 8.4 8.2 7.7 7.8	6.8 6.6 6.5 6.7 6.3	7.3 7.4 7.1 7.0 7.2
MONTH										8.9	6.3	7.6

### 03463300 SOUTH TOE RIVER NEAR CELO, NC

LOCATION.--Lat 35°49'53", long 82°11'03", Yancey County, Hydrologic Unit 06010108, on right bank on Secondary Road 1168, 800 ft upstream from bridge on Secondary Road 1167, 0.3 mi downstream of Whiteoak Creek, 1.9 mi southeast of Celo, and at mile 20.1.

DRAINAGE AREA.--43.3 mi<sup>2</sup>.

PERIOD OF RECORD .-- July 1957 to current year.

REVISED RECORDS.--WSP 1910: 1958-59. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,658 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

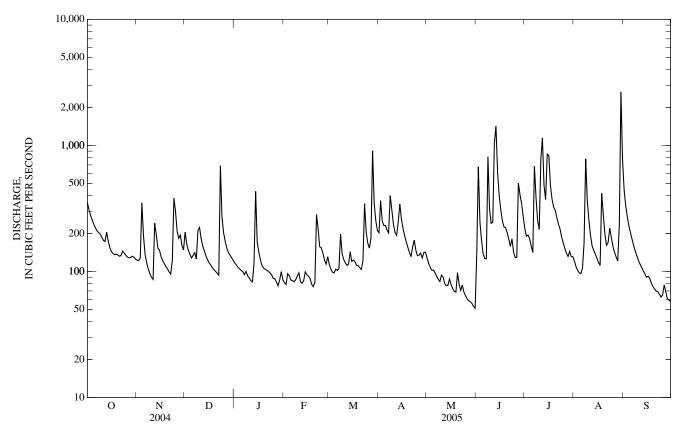
REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; gage height from outside floodmarks. Minimum discharge for period of record also occurred Sept. 26, 27, 1999, Sept. 11, 12, 13, 2002. Minimum discharge for current water year also occurred May 31, June 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2	351 309	e123 e122	205 165	116 113	81 79	113 104	203 364	128 116	135 676	219 190	121 109	442 332
3	278	e128	147	108	96	99	252	108	248	195	102	270
4 5	257 237	e350 192	136 128	105 102	92 85	97 104	231 232	102 102	177 138	182 159	97 96	229 202
6 7	222 210	136 117	134 141	100 94	85 83	102 105	213 202	97 91	127 126	141 686	106 168	179 159
8	203	105	141 125	100	83 86	105	202 399	87	811	080 387	782	139
9	198	96	211	92	92	138	309	83	311	254	367	132
10	187	90	223	89	97	124	236	94	241	215	254	121
11	176	86	182	85	83	117	204	90	246	771	194	114
12 13	172 205	241 195	159 146	83 116	80 85	112 114	193 246	80 77	1,040 1,420	$\substack{1,140\\481}$	160 147	107 101
14	174	153	133	432	99	143	343	78	618	372	138	95
15	155	147	124	170	94	120	260	87	402	852	127	90
16	144	131	117	142	92	123	219	79	308	831	118	92 88
17 18	139 136	122 115	112 107	123 e111	88 79	120 112	192 172	73 70	253 225	480 374	111 416	88 80
18	e137	109	107	e106	76	112	155	68	223	323	281	80 76
20	e135	105	e100	104	82	107	141	98	203	305	197	73
21	e132	99	e97	102	283	104	131	79	181	267	161	70
22	e134	95 122	93	e100	218	122	157	71	158	238	169 220	69 66
23 24	e145 e140	122 382	689 270	e97 e94	157 154	345 205	177 147	78 68	181 142	217 188	186	63
25	e134	298	203	88	139	167	133	64	129	168	158	65
26	e130	209	173	87	123	153	135	61	129	152	142	78
27 28	e128 e129	183 194	153 141	82 77	114 131	184 905	140	59 57	503 406	139 131	130 121	69 61
28 29	e129 e132	194 161	141 134	86	131	905 347	128 141	57 56	406 346	131	236	59
30	e130	148	128	100		253	142	53	272	131	2,660	58
31	e125		122	86		211		51		131	772	
TOTAL	5,484	4,754	5,101	3,490	3,053	5,359	6,197	2,505	10,375	10,463	9,046	3,784
MEAN MAX	177 351	158 382	165 689	113 432	109 283	173 905	207 399	80.8 128	346 1,420	338 1,140	292 2,660	126 442
MIN	125	86	93	77	76	903	128	51	126	131	2,000	58
CFSM	4.09	3.66	3.80	2.60	2.52	3.99	4.77	1.87	7.99	7.79	6.74	2.91
IN.	4.71	4.08	4.38	3.00	2.62	4.60	5.32	2.15	8.91	8.99	7.77	3.25
STATIST	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1957 - 2005	, BY WATE	R YEAR (W	/Y)			
MEAN	123	145	137	159	178	221	189	151	126	87.7	97.3	127
MAX (WY)	359 (1996)	714 (1978)	277 (1984)	428 (1995)	466 (1998)	596 (1979)	361 (1983)	373 (1976)	415 (1972)	338 (2005)	323 (1994)	1,268 (2004)
MIN	15.8	24.9	41.5	62.2	76.6	69.1	59.7	53.1	34.8	23.3	(1994)	(2004)
(WY)	(1994)	(1999)	(1966)	(1966)	(1963)	(1988)	(1986)	(1986)	(1988)	(1986)	(2002)	(1998)

# 03463300 SOUTH TOE RIVER NEAR CELO, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEA	R FOR 2005 WATER YEAR	WATER YEARS 1957 - 2005
ANNUAL TOTAL	74,978	69,611	
ANNUAL MEAN	205	191	145
HIGHEST ANNUAL MEAN			227 1979
LOWEST ANNUAL MEAN			79.4 1988
HIGHEST DAILY MEAN	8,390 Sep 8	2,660 Aug 30	9,960 Nov 6, 1977
LOWEST DAILY MEAN	37 Jul 23	51 May 31	9.5 Sep 12, 2002
ANNUAL SEVEN-DAY MINIMUM	45 Aug 17	57 May 25	11 Sep 20, 1999
MAXIMUM PEAK FLOW	6	9,340 Aug 30	32,900* Nov 6, 1977
MAXIMUM PEAK STAGE		8.11 Aug 30	17.41* Nov 6, 1977
INSTANTANEOUS LOW FLOW		51* May 30	9.4* Sep 25, 1999
ANNUAL RUNOFF (CFSM)	4.73	4.40	3.35
ANNUAL RUNOFF (INCHÉS)	64.42	59.80	45.47
10 PERCENT EXCEEDS	256	336	260
50 PERCENT EXCEEDS	96	134	99
90 PERCENT EXCEEDS	51	81	37

\* See REMARKS. e Estimated.



### 03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

LOCATION.--Lat 36°14'21", long 81°49'20", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft upstream from bridge on Secondary Road 1121, 300 ft downstream of Cove Creek, 2.3 mi southwest of Sugar Grove, and at mile 64.4.

DRAINAGE AREA.--92.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS .-- WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record from rating curve extended above 7,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow, from profile based on floodmarks. Minimum discharge for period of record, result of freezeup. Minimum discharge for current water year also occurred Sept. 25.

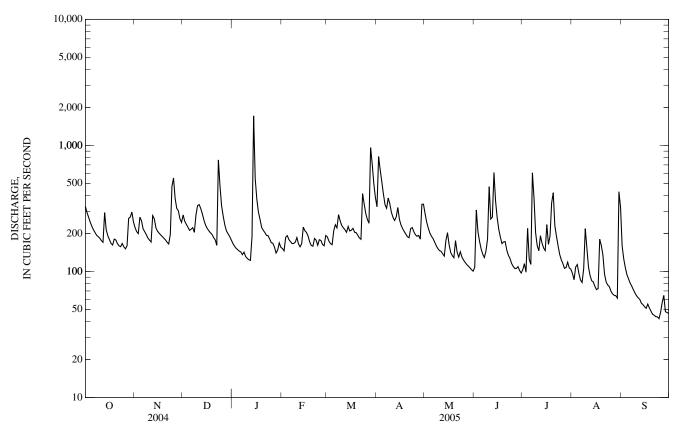
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft, from floodmarks on barn 0.25 mi upstream from station, as witnessed by local resident; discharge, 28,000 ft<sup>3</sup>/s, from rating curve extended above 4,900 ft<sup>3</sup>/s, on basis of slope-area measurement.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	222	281	167	152	188	325	288	108	103	96	159
2	293	207	250	159	146	e174	817	247	307	115	86	126
3	269	199	236	153	187	e166	638	221	207	99	108	107
4	246	270	224	149	192	163	514	202	173	220	113	94
5	229	253	212	145	179	210	412	190	151	125	97	87
6	214	218	216	143	172	235	339	182	137	114	86	81
7	204	207	222	136	166	221	317	171	129	606	82	76
8	194	196	204	142	167	282	382	160	145	382	105	72
9	189	184	280	132	171	252	344	152	181	203	218	67
10	183	177	332	127	186	231	294	146	470	160	153	64
11	175	171	339	124	165	222	268	144	260	146	108	62
12	170	277	316	122	157	214	254	138	270	192	93	60
13	293	262	286	190	166	204	271	132	610	168	84	56
14	214	222	255	1,710	225	227	321	176	363	153	82	55
15	192	208	233	543	210	209	259	203	268	146	76	52
16	179	201	219	373	204	212	233	163	216	235	72	51
17	167	195	211	295	190	220	218	141	187	164	73	55
18	162	189	203	258	171	204	207	134	166	192	180	51
19	180	183	197	224	161	203	198	129	171	350	160	48
20	178	178	e186	212	159	194	188	176	173	421	135	46
21	166	170	e178	204	183	185	185	142	148	231	96	45
22	160	165	161	193	177	180	218	130	134	190	83	44
23	157	197	766	192	161	414	223	143	127	160	78	44
24	166	471	476	e181	178	343	206	130	116	137	76	42
25	157	552	332	e169	176	288	195	123	110	124	70	47
26 27 28 29 30 31	151 160 264 270 296 247	380 317 303 262 245	275 234 210 199 190 178	167 156 140 148 168 155	164 160 193 	258 241 961 717 498 386	190 193 180 340 342	118 113 110 107 103 100	106 106 109 102 97	116 106 107 118 107 104	66 65 64 61 428 324	57 65 48 47 47
TOTAL	6,452	7,281	8,101	7,377	4,918	8,702	9,071	4,814	5,847	5,794	3,618	1,955
MEAN	208	243	261	238	176	281	302	155	195	187	117	65.2
MAX	327	552	766	1,710	225	961	817	288	610	606	428	159
MIN	151	165	161	122	146	163	180	100	97	99	61	42
CFSM	2.26	2.64	2.84	2.58	1.91	3.05	3.28	1.69	2.12	2.03	1.27	0.71
IN.	2.61	2.94	3.27	2.98	1.99	3.51	3.66	1.94	2.36	2.34	1.46	0.79
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1940 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	111	155	173	210	262	303	259	179	147	113	119	121
MAX	380	662	434	817	643	858	689	411	583	461	1,169	1,049
(WY)	(1965)	(1978)	(1951)	(1995)	(1998)	(1979)	(1987)	(1973)	(1992)	(1989)	(1940)	(2004)
MIN	19.2	34.6	45.6	55.5	67.5	77.0	82.1	67.5	41.4	35.0	23.9	18.1
(WY)	(1955)	(1982)	(1964)	(1956)	(1941)	(1988)	(1986)	(1941)	(1988)	(1944)	(2002)	(1954)

# 03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YI	EAR FOR 2005 WATER YEAR	WATER YEARS 1940 - 2005
ANNUAL TOTAL	92,233	73,930	
ANNUAL MEAN	252	203	177
HIGHEST ANNUAL MEAN			297 1979
LOWEST ANNUAL MEAN			84.7 1988
HIGHEST DAILY MEAN	8,970 Sep 8	1,710 Jan 14	15,900 Aug 13, 1940
LOWEST DAILY MEAN	41 Aug 31	42 Sep 24	8.1 Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	47 Aug 26	45 Sep 19	11 Sep 7, 2002
MAXIMUM PEAK FLOW	Ũ	4,000 Jan 14	50,800* Aug 13, 1940
MAXIMUM PEAK STAGE		8.89 Jan 14	29.60 Aug 13, 1940
INSTANTANEOUS LOW FLOW		41* Sep 24	6.5* Jan 1, 1954
ANNUAL RUNOFF (CFSM)	2.74	2.20	1.92
ANNUAL RUNOFF (INCHÉS)	37.25	29.86	26.15
10 PERCENT EXCEEDS	312	324	324
50 PERCENT EXCEEDS	174	180	117
90 PERCENT EXCEEDS	75	82	39

\* See REMARKS. e Estimated.



### 03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, NC

LOCATION.--Lat 35°09'00", long 83°22'47", Macon County, Hydrologic Unit 06010202, on left bank 600 ft upstream from Owenby Branch, 0.5 mi upstream from Cartoogechaye Creek, 2 mi north of Prentiss, and at mile 119.5.

DRAINAGE AREA.--140 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS .-- WSP 1236: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 2,008.39 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for period of record also occurred Aug. 30, 31, Sept. 16, 17, 2000.

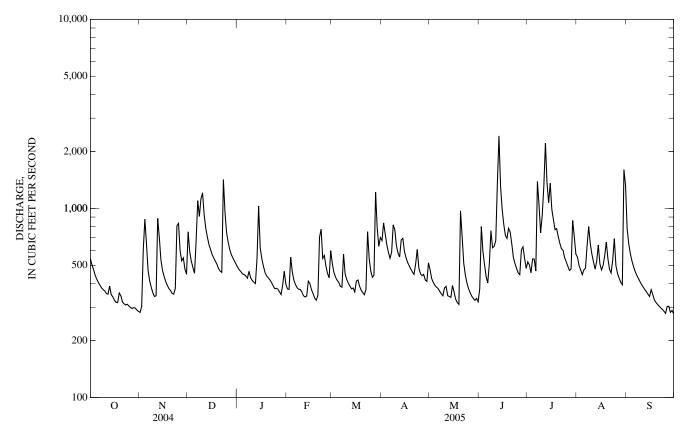
EXTREMES OUTSIDE PERIOD OF RECORD .-- Flood in October 1898 reached a stage of about 15 ft, from profiles by Tennessee Valley Authority.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
$\frac{1}{2}$	542 502	282 303	752 589	487 472	375 373	510 458	676 838	474 426	375 802	521 503	553 498	782 651
3	474	607	525	462	553	433	734	406	592	456	472	577
4	442	877	486	450	462	416	642	392	504	540	447	527
5	422	650	454	447	417	407	585	383	435	540	473	492
6	405	470	680	439	396	387	545	377	403	466	483	464
7 8	392 379	414 382	1,100 906	428 465	381 374	383 574	585 819	364 354	511 763	$1,390 \\ 1,050$	635 801	443 427
8 9	372	382 357	1,120	403	374	450	771	334 345	619	742	652	427
10	365	342	1,210	416	361	421	635	379	629	920	573	396
11	354	345	926	407	345	402	580	387	676	1,310	521	384
12	352	886	786	401	340	388	553	345	1,350	2,220	477	373
13	388	706 535	706	545	344	375 379	681 694	342	2,420	1,360 1,070	525 641	362 352
14 15	350 340	535 470	643 607	1,030 619	412 401	379 361	694 593	339 392	1,310 989	1,070 1,360	641 510	352 342
16 17	327	437	569	540	371 354	413	548	361	823	990 870	472 499	372 350
17	319 317	411 392	546 526	495 458	334 335	418 388	518 497	330 318	720 694	870 771	499 563	328
19	357	377	506	439	327	369	477	311	784	782	664	318
20	346	368	479	430	347	359	461	970	e750	709	542	310
21	320	355	466	419	704	349	448	716	e650	654	477	304
22	313	352	459	406	776	374	508	515	e550	613	455	297
$\frac{1}{23}$ 24	308 311	378 809	1,420 954	391 377	544 563	754 543	606 484	444 404	511 481	600 548	534 692	293 286
24 25	305	809	934 745	378	496	466	404	377	456	522	498	280
26	299	597	662	374	453	432	441	359	446	494	453	303
20	299	528	605	362	435	432	441	344	603	494 470	433	303
28	298	548	569	350	597	1,220	419	334	626	478	407	282
29	297	478	545	393		790	411	326	543	864	395	289
30 31	290	449	525	465		631 701	515	334	482	712	1,610	278
	285		505	397				321		573	1,320	
TOTAL	11,067	14,938	21,571	14,171	12,203	14,994	17,163	12,469	21,497	25,098	18,269	11,575
MEAN MAX	357 542	498 886	696 1,420	457 1,030	436 776	484 1,220	572 838	402 970	717 2,420	810 2,220	589 1,610	386 782
MIN	285	282	454	350	327	349	411	311	375	456	395	278
CFSM	2.55	3.56	4.97	3.27	3.11	3.45	4.09	2.87	5.12	5.78	4.21	2.76
IN.	2.94	3.97	5.73	3.77	3.24	3.98	4.56	3.31	5.71	6.67	4.85	3.08
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1944 - 2005	BY WATE	R YEAR (W	/Y)			
MEAN	249	305	395	480	555	595	553	426	345	265	243	238
MAX	1,078	815	841	1,008	1,252	1,199	1,014	999	717	810	695	1,030
(WY)	(1965)	(1980)	(1962)	(1946)	(1990)	(1952)	(1964)	(1976)	(2005)	(2005)	(1974)	(2004)
MIN	70.5	101	153	120	222	244	172	157	110	94.8	78.3	80.2
(WY)	(1955)	(1955)	(2001)	(1981)	(1986)	(1988)	(1986)	(1986)	(1988)	(1986)	(1986)	(1954)

# 03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS	5 1944 - 2005
ANNUAL TOTAL	151,237		195,015			
ANNUAL MEAN	413		534		387	
HIGHEST ANNUAL MEAN					588	1949
LOWEST ANNUAL MEAN					173	1986
HIGHEST DAILY MEAN	7,830	Sep 17	2,420	Jun 13	7,830	Sep 17, 2004
LOWEST DAILY MEAN	137	Aug 19	278	Sep 30	52	Aug 30, 2000
ANNUAL SEVEN-DAY MINIMUM	144	Aug 14	289	Sep 24	58	Sep 14, 2000
MAXIMUM PEAK FLOW		e	2,650	Jun 13	12,200	Oct 4, 1964
MAXIMUM PEAK STAGE			6.85	Jun 13	17.30	Oct 4, 1964
INSTANTANEOUS LOW FLOW			270	Sep 30	52*	Sep 17, 1999
ANNUAL RUNOFF (CFSM)	2.95		3.82	1	2.76	1 ,
ANNUAL RUNOFF (INCHES)	40.19		51.82		37.54	
10 PERCENT EXCEEDS	654		794		695	
50 PERCENT EXCEEDS	324		465		309	
90 PERCENT EXCEEDS	178		334		129	

\* See REMARKS. e Estimated.



### 03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, NC

LOCATION.--Lat 35°09'32", long 83°23'39", Macon County, Hydrologic Unit 06010202, on downstream side of center pier of bridge on Secondary Road 1152, 0.1 mi downstream of unnamed creek, 1.8 mi south of Franklin, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--57.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1947, 1953-55, 1958, 1960. June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,017.18 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record from rating curve extended above 3,300 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow. Minimum discharge for current water year also occurred Sept. 30. Minimum discharge for period of record also occurred Oct. 8, 1986.

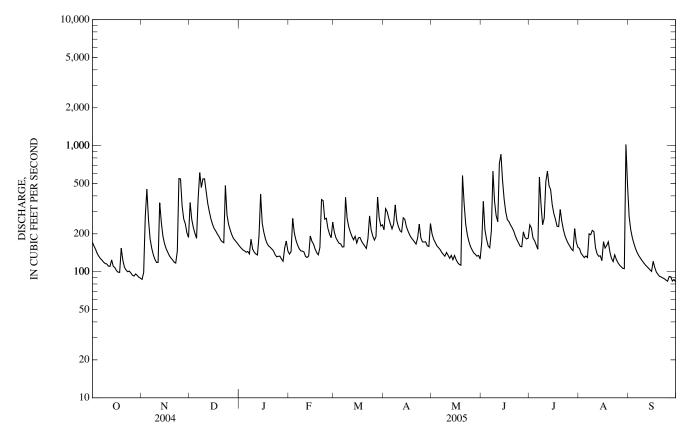
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1949 reached a stage of 15.6 ft, from studies by Tennessee Valley Authority; discharge, about 7,000 ft<sup>3</sup>/s.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	87	355	159	138	206	215	200	172	236	153	275
2	160	99	261	153	144	186	316	181	362	223	140	215
3	151	274	224	149	265	176	299	171	215	185	135	186
4	139	452	201	146	205	168	265	161	181	176	129	167
5	133	260	184	143	179	166	240	155	161	163	133	153
6	127	183	381	145	164	157	219	150	155	151	130	142
7	123	154	612	139	153	158	239	143	211	565	200	134
8	119	137	466	182	147	390	339	137	628	341	197	128
9	116	126	547	151	146	265	254	133	362	236	213	123
10	115	119	546	143	144	227	228	142	279	267	208	118
11	111	119	433	138	132	206	212	135	249	517	155	114
12	110	353	348	136	130	190	207	128	721	630	139	110
13	124	248	299	194	133	179	268	135	856	482	133	107
14	111	192	262	412	192	191	261	125	528	448	134	104
15	108	168	237	242	174	169	227	135	375	341	122	101
16	102	153	220	206	166	186	210	125	298	289	173	121
17	99	143	210	182	151	187	196	118	259	261	154	108
18	99	134	199	168	142	175	186	114	250	230	161	99
19	154	129	190	160	136	167	180	113	235	228	173	95
20	123	125	179	156	156	160	173	581	223	312	143	92
21	109	119	173	152	374	153	166	349	210	250	128	91
22	103	117	170	147	367	184	186	238	192	215	120	89
23	100	145	484	137	261	277	238	196	179	192	136	88
24	101	548	283	131	266	214	186	174	169	178	125	86
25	98	545	237	133	220	192	173	158	159	167	118	84
26 27 28 29 30 31	94 92 96 93 90 89	333 262 240 203 187	215 197 184 178 171 165	133 126 121 154 175 146	199 186 247 	178 190 392 268 231 236	172 173 161 159 242	149 141 137 133 135 126	158 207 187 182 185	160 151 147 220 172 157	113 110 107 106 1,020 487	92 91 84 87 83
TOTAL	3,560	6,354	8,811	5,059	5,317	6,424	6,590	5,218	8,548	8,290	5,695	3,567
MEAN	115	212	284	163	190	207	220	168	285	267	184	119
MAX	171	548	612	412	374	392	339	581	856	630	1,020	275
MIN	89	87	165	121	130	153	159	113	155	147	106	83
CFSM	2.01	3.71	4.98	2.86	3.33	3.63	3.85	2.95	4.99	4.68	3.22	2.08
IN.	2.32	4.14	5.74	3.30	3.46	4.19	4.29	3.40	5.57	5.40	3.71	2.32
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1961 - 2005	, BY WATE	R YEAR (W	/Y)			
MEAN	83.2	110	150	188	219	237	200	157	122	92.3	83.3	80.7
MAX	295	266	317	336	460	440	375	339	285	267	185	393
(WY)	(1965)	(1993)	(1962)	(1996)	(1990)	(1980)	(1964)	(1976)	(2005)	(2005)	(1994)	(2004)
MIN	24.7	41.2	52.2	55.2	99.1	84.7	72.9	56.3	42.3	32.7	28.7	25.6
(WY)	(2001)	(2002)	(1966)	(1981)	(2002)	(1988)	(1986)	(2001)	(1988)	(2000)	(2000)	(1999)

# 03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS 1961 - 2005		
ANNUAL TOTAL	59,660		73,433				
ANNUAL MEAN	163		201		143		
HIGHEST ANNUAL MEAN					204	1990	
LOWEST ANNUAL MEAN					69.9	1986	
HIGHEST DAILY MEAN	3,340	Sep 17	1,020	Aug 30	3,340	Sep 17, 2004	
LOWEST DAILY MEAN	52	Sep 6	83	Sep 30	18	Oct 7, 1986	
ANNUAL SEVEN-DAY MINIMUM	59	Aug 14	87	Sep 24	19	Sep 14, 2000	
MAXIMUM PEAK FLOW		-	1,500	Jun 12	6,440*	Sep 17, 2004	
MAXIMUM PEAK STAGE			8.02	Jun 12	14.12	Sep 17, 2004	
INSTANTANEOUS LOW FLOW			79*	Sep 26	16*	Oct 7, 1986	
ANNUAL RUNOFF (CFSM)	2.85		3.52		2.50		
ANNUAL RUNOFF (INCHES)	38.87		47.84		34.04		
10 PERCENT EXCEEDS	260		340		260		
50 PERCENT EXCEEDS	120		170		108		
90 PERCENT EXCEEDS	72		110		47		

\* See REMARKS.



### 0350056050 CULLASAJA RIVER AT SR 1620 NEAR HIGHLANDS, NC

LOCATION.--Lat 35°04'34", long 83°14'56", Macon County, Hydrologic Unit 06010202, at bridge on Secondary Road 1620, downstream from Long Branch and approximately 3.4 mi northwest of Highlands.

DRAINAGE AREA .-- 18.8 mi<sup>2</sup>.

PERIOD OF RECORD.--July 2001 to current year.

REVISED RECORDS .-- WDR NC-04-01: 2001-2003(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,230 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

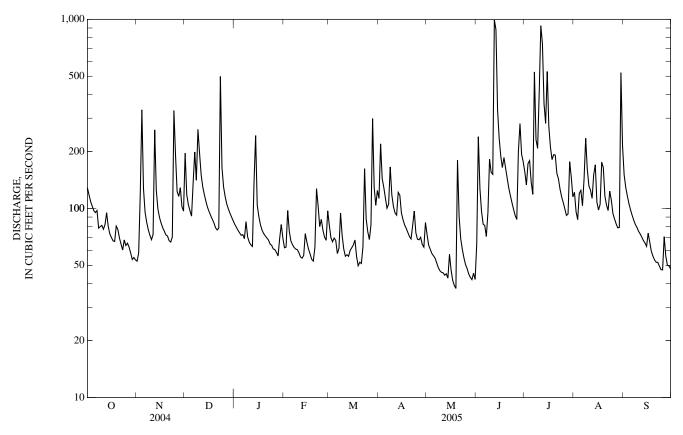
REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record, from rating curve extended above 2,300 ft<sup>3</sup>/s, on basis of peak flow over dam at Lake Sequoyah. Minimum discharge for period of record also occurred Sept. 12, 2002.

					DAII	LI MILAN V	ALUES					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	53	196	82	62	81	113	73	65	156	122	151
2	118	58	118	79	62	70	219	64	239	133	96	129
3	109	120	105	77	98	67	144	61	127	173	87	116
4	103	332	97	74	76	70	129	58	96	179	120	106
5	97	127	91	72	67	68	113	56	83	137	125	98
6	95	95	137	73	64	58	100	55	81	119	103	92
7	97	85	199	69	62	61	105	52	71	527	144	87
8	79	77	141	85	61	95	166	49	95	231	235	82
9	80	72	262	71	60	72	118	47	182	208	161	79
10	81	68	196	66	58	61	102	46	155	412	132	76
11	78	73	150	64	55	56	95	46	151	924	e125	73
12	82	260	130	63	55	57	92	44	992	744	e113	71
13	95	125	118	137	56	56	121	45	881	358	151	68
14	80	99	109	243	73	60	117	43	333	282	170	66
15	73	90	101	104	66	62	94	57	235	530	e108	63
16	70	84	96	91	61	64	87	47	189	272	e98	74
17	67	79	91	82	57	68	82	42	164	211	e105	66
18	67	76	87	77	54	56	78	39	186	181	175	59
19	81	72	84	74	53	50	75	38	163	192	165	56
20	77	71	79	72	62	52	71	180	145	192	116	53
21	70	68	77	70	127	51	69	91	128	153	104	52
22	65	66	79	68	103	63	81	69	117	143	97	52
23	60	71	499	65	80	162	97	61	107	126	123	49
24	68	330	164	64	87	88	74	55	99	115	111	47
25	64	191	130	61	77	75	69	50	92	107	94	47
26 27 28 29 30 31	65 62 58 54 55 53	123 116 129 102 97	115 105 99 94 90 86	61 59 56 69 82 70	71 68 97 	68 82 299 129 104 125	68 70 65 62 84	48 45 43 42 45 42	87 199 281 193 176	99 92 93 177 147 115	88 83 79 79 522 215	71 56 50 50 48
TOTAL	2,432	3,409	4,125	2,480	1,972	2,530	2,960	1,733	6,112	7,528	4,246	2,187
MEAN	78.5	114	133	80.0	70.4	81.6	98.7	55.9	204	243	137	72.9
MAX	129	332	499	243	127	299	219	180	992	924	522	151
MIN	53	53	77	56	53	50	62	38	65	92	79	47
CFSM	4.18	6.06	7.09	4.26	3.75	4.35	5.26	2.98	10.9	12.9	7.30	3.89
IN.	4.82	6.76	8.18	4.92	3.91	5.02	5.87	3.44	12.12	14.93	8.42	4.34
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WATI	ER YEARS	2001 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	61.6	94.4	104	73.8	83.6	77.3	81.2	76.2	93.0	93.7	67.4	138
MAX	78.5	133	133	80.0	105	97.0	99.0	131	204	243	137	366
(WY)	(2005)	(2004)	(2005)	(2005)	(2004)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2004)
MIN	45.9	40.1	56.6	62.7	63.4	46.5	51.8	54.3	30.5	22.2	15.3	48.9
(WY)	(2004)	(2002)	(2002)	(2004)	(2002)	(2004)	(2004)	(2004)	(2002)	(2002)	(2002)	(2001)

# 0350056050 CULLASAJA RIVER AT SR 1620 NEAR HIGHLANDS, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	NDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS 2001 - 2005		
ANNUAL TOTAL	36,043		41,714				
ANNUAL MEAN	98.5		114		90.3		
HIGHEST ANNUAL MEAN					114	2005	
LOWEST ANNUAL MEAN					57.3	2002	
HIGHEST DAILY MEAN	2,840	Sep 17	992	Jun 12	2,840	Sep 17, 2004	
LOWEST DAILY MEAN	22	Jul 24	38	May 19	7.9	Aug 22, 2002	
ANNUAL SEVEN-DAY MINIMUM	25	Jul 20	44	May 13	8.5	Aug 9, 2002	
MAXIMUM PEAK FLOW			2,290	Jun 12	5,300*	Sep 17, 2004	
MAXIMUM PEAK STAGE			11.13	Jun 12	16.15	Sep 17, 2004	
INSTANTANEOUS LOW FLOW			35	May 19	6.7*	Aug 22, 2002	
ANNUAL RUNOFF (CFSM)	5.25		6.09	5	4.81	0	
ANNUAL RUNOFF (INCHES)	71.47		82.72		65.37		
10 PERCENT EXCEEDS	152		190		147		
50 PERCENT EXCEEDS	61		83		68		
90 PERCENT EXCEEDS	34		55		32		
	0.		00				

\* See REMARKS. e Estimated.



### 03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC

LOCATION.--Lat 35°20'11", long 83°31'37", Swain County, Hydrologic Unit 06010202, on left bank on Secondary Road 1113, 0.8 mi downstream of DeHart Creek, 0.8 mi north of Needmore, 2.4 mi downstream of Brush Creek, 6.3 mi downstream of Tellico Creek, and at mile 92.9.

DRAINAGE AREA.--436 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to December 1981, October 1983 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,761.19 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation caused by Porters Bend power plant at Lake Emory, 20 mi upstream. Minimum discharge for period of record also occurred Nov. 8, 1954. Minimum discharge for current water year also occurred Sept. 29, 30.

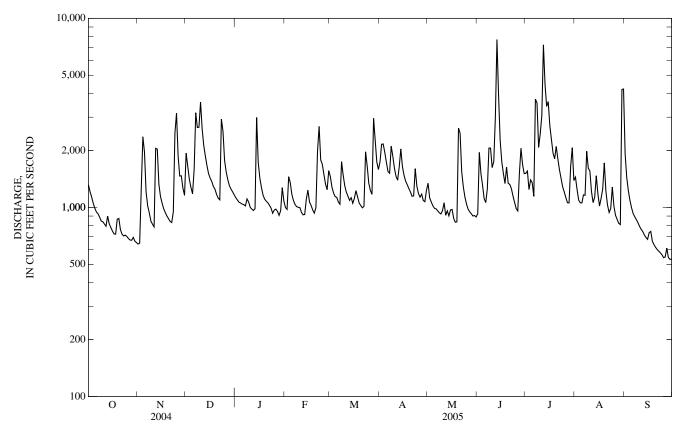
EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of October 1898 and Aug. 30, 1940, reached stages of about 13 and 11.5 ft, respectively, from flood profiles by Tennessee Valley Authority.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,320	640	1,940	1,130	999	1,460	1,740	1,340	927	1,510	1,450	1,920
2	1,210	647	1,650	1,090	976	1,280	2,160	1,120	1,950	1,560	1,240	1,440
3	1,140	1,270	1,410	1,070	1,450	1,190	2,160	1,070	1,510	1,240	1,090	1,230
4	1,050	2,360	1,280	1,050	1,350	1,140	1,950	1,020	1,310	1,400	1,060	1,090
5	991	1,960	1,180	1,040	1,170	1,130	1,730	989	1,110	1,350	1,060	995
6	946	1,210	1,590	1,030	1,090	1,070	1,550	982	1,060	1,140	1,160	928
7	926	1,020	3,170	1,020	1,030	1,040	1,520	959	1,260	3,740	1,160	893
8	888	936	2,650	1,110	1,010	1,750	2,110	937	2,060	3,570	1,980	861
9	847	846	2,650	1,070	1,000	1,490	1,870	923	2,060	2,080	1,610	830
10	839	815	3,610	1,000	997	1,300	1,610	961	1,620	2,450	1,560	794
11	817	789	2,600	980	940	1,200	1,460	1,060	1,750	3,060	1,210	766
12	795	2,050	2,120	963	914	1,150	1,390	909	2,990	7,240	1,060	745
13	900	2,030	1,870	984	917	1,090	1,640	959	7,730	4,480	1,130	714
14	819	1,330	1,660	2,990	1,100	1,130	2,040	902	3,920	3,420	1,470	694
15	783	1,140	1,510	1,730	1,230	1,050	1,640	970	2,270	3,630	1,180	678
16	750	1,050	1,430	1,430	1,070	1,120	1,480	975	1,750	2,710	1,020	736
17	724	983	1,370	1,270	1,020	1,230	1,380	874	1,510	2,280	1,120	746
18	722	938	1,290	1,160	969	1,140	1,320	835	1,340	1,940	1,250	661
19	866	901	1,250	1,110	933	1,050	1,260	839	1,640	1,810	1,720	636
20	874	872	1,170	1,080	997	1,020	1,210	2,630	1,340	2,100	1,220	615
21	763	844	1,120	1,060	1,980	995	1,140	2,470	1,320	1,810	1,030	599
22	721	832	1,100	1,030	2,680	1,010	1,150	1,540	1,260	1,580	940	587
23	706	946	2,930	991	1,780	1,970	1,600	1,280	1,150	1,430	985	575
24	713	2,470	2,530	931	1,690	1,650	1,300	1,130	1,060	1,290	1,280	561
25	702	3,150	1,770	968	1,490	1,340	1,180	1,040	986	1,210	1,010	542
26 27 28 29 30 31	684 672 670 694 663 652	1,870 1,470 1,470 1,260 1,160	1,540 1,400 1,300 1,250 1,210 1,170	979 953 908 961 1,270 1,080	1,330 1,240 1,560 	1,230 1,170 2,960 2,270 1,740 1,590	1,130 1,170 1,090 1,070 1,230	978 947 925 901 906 890	958 1,520 2,050 1,680 1,510	1,130 1,060 1,060 1,650 2,070 1,390	909 864 824 811 4,210 4,230	546 609 543 531 532
TOTAL	25,847	39,259	54,720	35,438	34,912	41,955	45,280	34,261	54,601	68,390	42,843	23,597
MEAN	834	1,309	1,765	1,143	1,247	1,353	1,509	1,105	1,820	2,206	1,382	787
MAX	1,320	3,150	3,610	2,990	2,680	2,960	2,160	2,630	7,730	7,240	4,230	1,920
MIN	652	640	1,100	908	914	995	1,070	835	927	1,060	811	531
CFSM	1.91	3.00	4.05	2.62	2.86	3.10	3.46	2.53	4.17	5.06	3.17	1.80
IN.	2.21	3.35	4.67	3.02	2.98	3.58	3.86	2.92	4.66	5.84	3.66	2.01
STATIS	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1944 - 2005	@ BY WAT	ER YEAR (	WY)			
MEAN	642	809	1,045	1,337	1,555	1,699	1,508	1,176	932	724	646	621
MAX	2,557	2,169	2,231	2,570	3,718	3,372	2,746	2,573	2,061	2,206	1,670	2,817
(WY)	(1965)	(1980)	(1962)	(1946)	(1990)	(1990)	(1964)	(1976)	(1949)	(2005)	(1967)	(2004)
MIN	192	282	368	349	660	596	553	458	351	238	213	201
(WY)	(1955)	(1955)	(1966)	(1981)	(1986)	(1988)	(1986)	(2001)	(1988)	(1986)	(1986)	(1999)

# 03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS	1944 - 2005 <sup>@</sup>
ANNUAL TOTAL ANNUAL MEAN	398,067 1,088		501,103 1,373		1,058	
HIGHEST ANNUAL MEAN	1,000		1,375		1,565	1973
LOWEST ANNUAL MEAN HIGHEST DAILY MEAN	16,400	Sep 17	7,730	Jun 13	495 17,200	1986 Oct 5, 1964
LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM	380 415	Aug 20 Aug 14	531 552	Sep 29 Sep 24	71 142	Nov 7, 1954 Oct 2, 1986
MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE			9,860 7.78	Jun 13 Jun 13	22,100 12.87	Oct 5, 1964 Oct 5, 1964
INSTANTANEOUS LOW FLOW	2.10		523*	Sep 26	52*	Nov 7, 1954
ANNUAL RUNOFF (CFSM) ANNUAL RUNOFF (INCHES)	2.49 33.96		3.15 42.75		2.43 32.97	
10 PERCENT EXCEEDS 50 PERCENT EXCEEDS	1,680 840		2,100 1,140		1,910 820	
90 PERCENT EXCEEDS	465		776		364	

<sup>@</sup> See PERIOD OF RECORD.\* See REMARKS.



# 03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC-Continued

### PRECIPITATION RECORDS

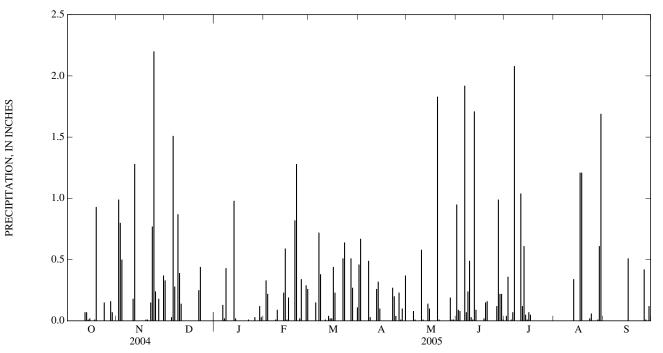
#### PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Tipping-bucket raingage and electronic datalogger. Satellite telemetry at station.

REMARKS.--Gage is operated in cooperation with Tennessee Valley Authority. Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

### PRECIPITATION, TOTAL, INCHES WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.33	0.00	0.00	0.00	0.46	0.00	0.95	0.00		0.00
2	0.00	0.99	0.00	0.00	0.33	0.00	0.67	0.00	0.09	0.04		0.00
2 3	0.00	0.80	0.00	0.00	0.22	0.00	0.00	0.00	0.08	0.36		0.00
4	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
5	0.00	0.00	0.03	0.00	0.00	0.15	0.00	0.08	0.00	0.01		0.00
6	0.00	0.00	1.51	0.13	0.00	0.00	0.00	0.01	1.92	0.07		0.00
7	0.00	0.00	0.28	0.13	0.00	0.00	0.00	0.01	0.07	2.08		0.00
8	0.00	0.00	0.28	0.02	0.00	0.72	0.49	0.00	0.07	2.08		0.00
9	0.00	0.00	0.00	0.43	0.01	0.38	0.03	0.00	0.24	0.00	0.00	0.00
10			0.87						0.49			
10	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.58	0.03	0.00	0.00	0.00
11	0.00	0.18	0.14	0.00	0.00	0.01	0.00	0.01	0.01	1.04	0.00	0.00
12	0.07	1.28	0.00	0.00	0.00	0.00	0.26	0.00	1.71	0.12	0.00	0.00
13	0.07	0.00	0.00	0.98	0.23	0.04	0.32	0.00	0.09	0.61	0.34	0.00
14	0.01	0.00	0.00	0.02	0.59	0.02	0.10	0.14	0.00	0.05	0.00	0.00
15	0.02	0.00	0.00	0.00	0.01	0.02	0.00	0.10	0.00	0.01	0.00	0.00
16	0.00	0.00	0.00	0.00	0.19	0.44	0.00	0.00	0.00	0.07	0.00	0.51
17	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.05	1.21	0.00
18	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02		1.21	0.00
19	0.93	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.15		0.00	0.00
20	0.00	0.01	0.00	0.00	0.82	0.00	0.00	1.83	0.16		0.00	0.00
21	0.00	0.00	0.00	0.00	1.28	0.00	0.00	0.01	0.00		0.00	0.00
22	0.00	0.15	0.25	0.01	0.00	0.51	0.27	0.00	0.00		0.00	0.00
23	0.00	0.77	0.44	0.00	0.02	0.64	0.20	0.00	0.00		0.02	0.00
24	0.15	2.20	0.00	0.00	0.34	0.00	0.04	0.00	0.00		0.06	0.00
25	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
26	0.00	0.00	0.00	0.03	0.00	0.00	0.23	0.00	0.12		0.00	0.42
27	0.00	0.18	0.00	0.00	0.29	0.51	0.01	0.00	0.99		0.00	0.01
28	0.16	0.00	0.00	0.00	0.26	0.27	0.10	0.19	0.22		0.01	0.00
29	0.07	0.00	0.00	0.12		0.00	0.00	0.01	0.22		0.61	0.12
30	0.00	0.37	0.00	0.03		0.00	0.37	0.01	0.01		1.69	0.00
31	0.00		0.00	0.00		0.11		0.00			0.00	
		7 (0			4.69		2 55		7 57			1.00
TOTAL	1.49	7.68	4.24	1.77	4.68	4.05	3.55	2.97	7.57			1.06



### 03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, NC

LOCATION.--Lat 35°07'39", long 83°37'07", Macon County, Hydrologic Unit 06010202, on right bank on Forest Service Road 437 in Nantahala National Forest, 300 ft upstream from Roaring Fork, 0.2 mi downstream of Buck Creek, 4 mi northwest of town of Rainbow Springs, and at mile 34.3.

DRAINAGE AREA .-- 51.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS .-- WSP 973: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 3,072.97 ft above NGVD of 1929. Satellite telemetry at station.

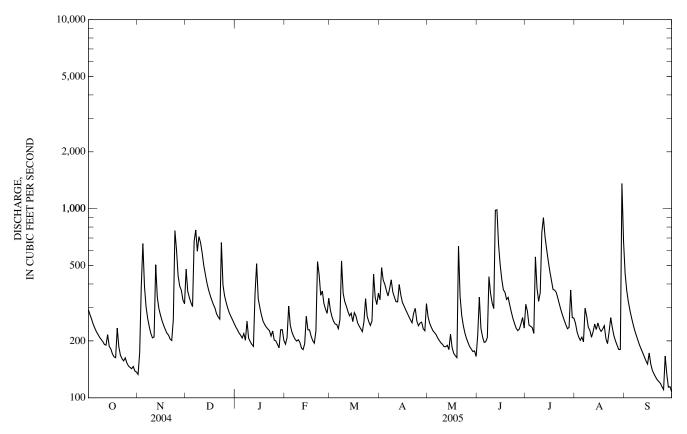
REMARKS.--No estimated daily discharges. Records good. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries upstream from station. Maximum discharge for period of record from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record also occurred Oct. 29, Nov. 1, 2, 1998.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	133	480	237	192	292	329	268	215	312	248	453
2	275	172	366	229	208	269	488	248	341	287	223	369
3	260	388	339	220	305	254	420	236	233	242	210	322
4	245	655	318	214	242	246	398	227	210	239	201	290
5	234	388	304	207	223	244	369	221	196	235	209	265
6	224	302	674	218	212	232	345	216	198	219	198	244
7	216	263	772	202	204	259	378	207	209	556	298	227
8	209	237	596	255	199	529	421	201	437	380	270	214
9	203	219	713	207	203	357	363	195	357	324	236	201
10	198	207	662	198	196	323	341	192	317	359	227	190
11	191	210	584	192	183	305	322	186	296	747	209	181
12	190	506	502	187	180	286	322	186	982	898	223	173
13	216	341	449	354	193	271	398	190	987	712	246	165
14	187	296	405	513	270	280	350	180	646	611	230	157
15	181	273	373	335	229	253	319	217	506	531	249	151
16	171	255	348	300	229	282	306	184	423	467	232	173
17	165	241	329	274	212	271	292	172	373	418	224	151
18	163	230	312	254	201	249	281	167	361	374	231	139
19	234	220	298	244	194	239	269	163	331	371	241	134
20	186	215	278	237	225	232	258	634	340	361	206	129
21	168	205	268	231	525	224	249	343	309	336	193	125
22	161	201	261	226	449	254	280	273	283	312	223	122
23	157	259	663	212	349	335	297	241	262	290	265	119
24	163	766	395	226	367	270	254	220	246	272	235	115
25	153	605	346	202	315	253	241	206	233	257	213	110
26 27 28 29 30 31	147 145 143 146 139 137	441 390 371 329 314	319 297 281 269 258 247	200 192 183 229 229 201	294 279 336 	241 255 451 340 311 357	249 251 232 226 315	195 186 181 176 177 165	227 231 247 266 234	243 232 236 371 265 264	200 189 180 180 1,360 675	166 134 114 115 108
TOTAL	5,899	9,632	12,706	7,408	7,214	8,964	9,563	6,853	10,496	11,721	8,524	5,556
MEAN	190	321	410	239	258	289	319	221	350	378	275	185
MAX	292	766	772	513	525	529	488	634	987	898	1,360	453
MIN	137	133	247	183	180	224	226	163	196	219	180	108
CFSM	3.67	6.19	7.90	4.60	4.96	5.57	6.14	4.26	6.74	7.29	5.30	3.57
IN.	4.23	6.90	9.11	5.31	5.17	6.43	6.85	4.91	7.52	8.40	6.11	3.98
STATIST	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1941 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	117	157	224	277	320	318	278	217	175	144	124	117
MAX	415	376	474	568	657	572	493	491	485	378	327	594
(WY)	(1965)	(1978)	(1993)	(1974)	(1957)	(1979)	(1979)	(1976)	(1989)	(2005)	(1994)	(2004)
MIN	35.6	56.6	77.2	84.4	115	138	118	96.8	67.1	59.0	49.5	41.8
(WY)	(2001)	(1955)	(1959)	(1981)	(1941)	(1988)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)

# 03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WA	TER YEAR	WATER YEARS 1941 - 2005		
ANNUAL TOTAL	89,882		104,536		202		
ANNUAL MEAN	246		286		205	2005	
HIGHEST ANNUAL MEAN					286	2005	
LOWEST ANNUAL MEAN					109	1986	
HIGHEST DAILY MEAN	3,620	Sep 17	1,360	Aug 30	3,620	Sep 17, 2004	
LOWEST DAILY MEAN	76	Sep 6	108	Sep 30	29	Nov 1, 1998	
ANNUAL SEVEN-DAY MINIMUM	85	Aug 31	122	Sep 19	30	Oct 26, 1998	
MAXIMUM PEAK FLOW		-	2,130	Aug 30	6,300*	Jun 16, 1949	
MAXIMUM PEAK STAGE			4.84	Aug 30	9.70	Jun 16, 1949	
INSTANTANEOUS LOW FLOW			103	Sep 30	29*	Oct 28, 1998	
ANNUAL RUNOFF (CFSM)	4.73		5.52	1	3.95		
ANNUAL RUNOFF (INCHÉS)	64.42		74.93		53.67		
10 PERCENT EXCEEDS	387		439		371		
50 PERCENT EXCEEDS	189		246		164		
90 PERCENT EXCEEDS	113		172		68		

\* See REMARKS.



### 03505550 NANTAHALA RIVER NEAR HEWITT, NC

LOCATION.--Lat 35°18'18", long 83°39'08", Swain County, Hydrologic Unit 06010202, on left bank, 1,655 ft downstream from bridge on US Highway 74, 0.2 mi southwest of Hewitt, and 2.5 mi northwest of Beachertown.

DRAINAGE AREA.--145 mi<sup>2</sup>.

PERIOD OF RECORD .-- December 2004 to September 2005.

GAGE.--Water-stage recorder. Elevation of gage is 1,910 ft above NVGD of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minimum discharge for current water year affected by regulation. Minimum discharge for current water year also occurred Sept. 30.

#### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

					2.111							
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			e400	573	253	631	362	557	405	450	699	831
2			335	729	255	471	437	519	606	421	440	825
3			295	850	287	254	450	467	547	576	432	818
4			265	583	218	251	415	495	558	582	433	812
5			235	352	344	429	380	505	562	573	441	813
6			419	e780	262	420	552	482	582	812	511	815
7			775	e800	393	418	848	477	607	984	614	815
8			1,100	831	242	560	902	471	568	891	614	712
9			1,230	811	199	504	868	529	645	851	826	570
10			1,250	808	314	460	799	530	713	828	821	527
11			1,200	804	256	519	743	424	704	865	739	521
12			1.120	814	182	415	742	415	815	931	438	376
13			1,070	832	157	466	756	434	972	976	450	447
14			1,030	904	202	284	745	107	892	971	534	443
15			960	850	228	265	730	111	850	912	550	444
16			978	839	230	593	699	100	836	876	543	468
17			965	768	247	667	441	94	824	865	495	519
18			951	777	256	677	490	323	832	849	507	457
19			942	702	255	731	491	788	846	763	539	492
20			906	547	268	424	503	1,010	847	854	593	488
21			884	551	460	303	471	734	832	852	612	439
22			872	540	443	268	496	944	673	840	412	431
23			936	534	354	646	690	876	815	834	336	452
24			897	477	696	884	822	826	701	828	528	298
25			886	228	892	863	764	817	696	823	554	285
26			876	238	875	796	519	795	581	820	763	328
27			866	268	864	787	528	667	351	542	812	345
28			853	376	874	795	535	563	344	450	741	344
29			842	422		746	511	570	553	518	793	337
30			853	420		394	544	561	780	449	643	345
31			839	280		418		457		565	612	
TOTAL			26,030	19,288	10,506	16,339	18,233	16,648	20,537	23,351	18,025	15,797
MEAN			840	622	375	527	608	537	685	753	581	527
MAX			1,250	904	892	884	902	1,010	972	984	826	831
MIN			235	228	157	251	362	94	344	421	336	285
51A1151	ICS OF MO	UNTHLYM	IEAN DATA	FUK WAT	EK TEARS	2005 - 2005	BI WAIE	K IEAR (W	1)			
MEAN			840	622	375	527	608	537	685	753	581	527
MAY			840	622	275	527	609	527	695	752	591	527

N MAX 840 622 375 527 608 537 685 753 581 527 ---(WY) ----(2005) (2005) (2005) (2005) (2005) (2005) (2005) (2005)(2005) (2005)----MIN ------84Ó 622 375 527 608 53Ź 685 753 581 52Ź (WY) ------(2005) (2005)(2005) (2005) (2005)(2005) (2005)(2005)(2005) (2005)

SUMMARY STATISTICS

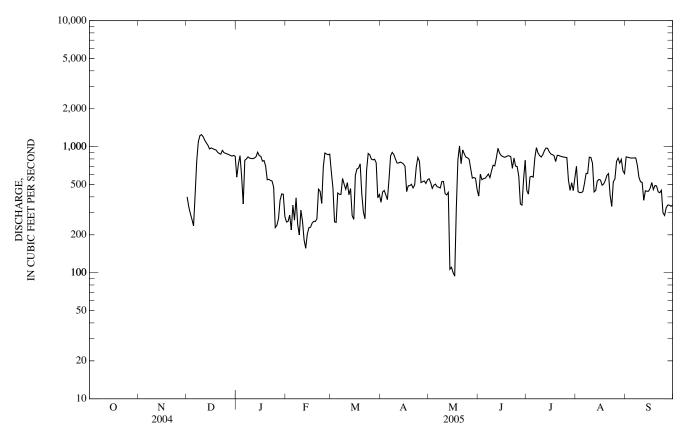
FOR 2005 WATER YEAR

MAXIMUM PEAK FLOW	2,010	May 20
MAXIMUM PEAK STAGE	4.33	May 20
INSTANTANEOUS LOW FLOW	56*	Sep 29

\* See REMARKS.

e Estimated.

03505550 NANTAHALA RIVER NEAR HEWITT, NC-Continued



### 03508050 TUCKASEGEE RIVER AT SECONDARY ROAD 1172 NEAR CULLOWHEE, NC

LOCATION.--Lat 35°17'16", long 83°08'38", Jackson County, Hydrologic Unit 06010203, on left bank, 10 ft downstream from bridge on Secondary Road 1172, 3.0 mi southeast of Cullowhee and at river mile 47.3.

DRAINAGE AREA .-- 147 mi<sup>2</sup>.

PERIOD OF RECORD.--September 2004 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,120 ft above NGVD of 1929 (from topographic map). Satellite telemetry at station.

REMARKS .-- No estimated daily discharges. Records fair. Flow regulated by Cedar Cliff Lake and Bear Creek Lake. Minimum discharge for period of record and current water year affected by regulation.

# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	625	528	835	660	259	496	605	459	296	788	674	1,270
2	622	490	841	837	243	358	291	363	803	786	621	1,110
3	638	503	705	766	281	222	350	351	665	800	880	871
4	686	735	584	841	260	221	385	304	468	809	856	809
5	247	683	335	844	293	190	357	274	605	873	839	834
6	524	847	508	836	371	193	677	285	242	1,380	327	817
7	526	813	535	840	344	192	749	233	601	1,830	675	787
8	519	775	719	843	105	535	560	290	709	1,670	727	711
9	519	723	946	758	104	576	465	266	843	1,800	819	612
10	398	587	946	802	104	352	470	292	887	1,590	506	686
11	465	131	921	684	100	458	435	254	899	1,380	732	619
12	483	492	851	316	100	347	679	307	2,950	2,420	679	473
13	686	840	794	412	102	489	471	515	5,050	2,040	706	397
14	413	823	812	629	117	343	814	568	2,220	1,830	626	395
15	220	816	738	509	154	310	472	609	1,370	1,760	621	285
16	502	643	677	515	331	425	500	610	963	1,360	541	264
17	556	527	838	592	199	555	654	496	979	940	684	299
18	770	562	835	583	281	545	320	448	924	992	892	220
19	633	592	821	591	293	382	223	434	886	897	856	213
20	577	437	839	572	372	385	184	503	808	1,080	760	323
21	619	434	845	506	690	337	281	701	914	1,740	688	659
22	553	425	755	328	922	299	497	704	808	1,780	526	661
23	324	558	898	326	884	551	420	349	743	1,070	463	575
24	733	740	854	340	879	768	413	417	774	1,010	580	177
25	472	902	854	379	530	614	515	315	773	865	655	87
26 27 28 29 30 31	380 334 301 571 334 775	886 813 812 824 747	863 872 870 870 864 858	322 277 245 299 240 181	518 510 610 	409 433 475 786 861 854	583 581 505 314 489	292 241 250 247 362 254	718 564 921 824 826	900 901 718 943 911 866	638 890 889 894 1,240 1,190	296 263 268 248 264
TOTAL	16,005	19,688	24,483	16,873	9,956	13,961	14,259	11,993	31,033	38,729	22,674	15,493
MEAN	516	656	790	544	356	450	475	387	1,034	1,249	731	516
MAX	775	902	946	844	922	861	814	704	5,050	2,420	1,240	1,270
MIN	220	131	335	181	100	190	184	233	242	718	327	87
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	2004 - 2005	, BY WATEF	R YEAR (W	YY)			
MEAN	516	656	790	544	356	450	475	387	1,034	1,249	731	1,239
MAX	516	656	790	544	356	450	475	387	1,034	1,249	731	1,961
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)
MIN	516	656	790	544	356	450	475	387	1,034	1,249	731	516
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
SUMMA	RY STATIS	STICS					FOR 2005	WATER Y	YEAR	WATER	YEARS 200	4 - 2005
LOWEST HIGHES		MEAN IEAN					235,14' 644 5,050 8	4 0 Ju 7 Sej	n 13 p 25	6 6 7,4	544 544 544 87 Se 87 Se	2005 2005 p 8, 2004 p 25, 2005

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15.86

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Jun 12 Jun 12

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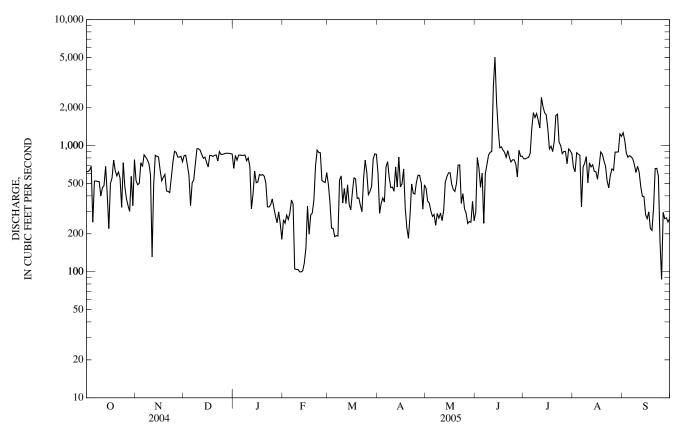
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Feb 8, 2005 Sep 8, 2004 Sep 8, 2004

Apr 18, 2005

Ι ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW 10 PERCENT EXCEEDS 50 PERCENT EXCEEDS 90 PERCENT EXCEEDS

\* See REMARKS.



### 03510577 TUCKASEGEE RIVER AT BARKERS CREEK, NC

LOCATION.--Lat 35°23'04", long 83°17'30", Jackson County, Hydrologic Unit 06010203, on old truss bridge near left bank, 60 ft upstream from bridge on Secondary Road 1392, 0.1 mi upstream from Barkers Creek and at river mile 27.3

DRAINAGE AREA.--360 mi<sup>2</sup>.

PERIOD OF RECORD .-- July 2004 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,920 ft above NGVD of 1929 (from topographic map). Satellite telemetry at station.

REMARKS .-- No estimated daily discharges. Records fair. Flow regulated by Cedar Cliff Lake and Bear Creek Lake. Minimum discharge for period of record and current water year affected by regulation.

#### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

					Dim		THECHO					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,130	841	1,620	1,120	612	1,100	1,200	956	640	1,290	1,230	1,820
2	1,080	688	1,490	1,270	607	875	1,060	868	1,240	1,220	987	1,630
3	1,050	940	1,320	1,190	798	726	1,060	800	1,180	1,260	1,220	1,320
4	1,070	1,360	1,250	1,250	688	685	1,080	766	773	1,240	1,250	1,220
5	792	1,190	936	1,250	684	674	986	707	1,040	1,240	1,230	1,190
6	726	1,210	1,250	1,260	712	648	1,250	705	553	1,610	934	1,180
7	847	1,140	1,530	1,240	744	648	1,280	652	1,080	2,990	925	1,120
8	829	1,060	1,450	1,310	488	1,250	1,250	683	1,100	2,390	1,260	1,130
9	782	1,050	2,030	1,190	474	1,210	1,010	654	1,330	2,310	1,340	826
10	681	837	2,020	1,170	477	1,010	1,000	750	1,250	2,190	1,110	987
11	723	521	1,880	1,180	448	945	975	744	1,300	2,020	1,120	967
12	695	1,160	1,690	718	441	905	1,200	685	2,380	3,180	1,130	802
13	969	1,400	1,560	762	463	897	1,370	834	6,900	2,880	1,310	676
14	812	1,250	1,500	1,710	573	930	1,720	954	3,180	2,510	1,170	669
15	393	1,190	1,500	1,120	580	761	1,260	1,080	2,290	2,360	1,080	552
16	652	1,030	1,200	1,050	679	916	1,120	1,150	1,550	2,100	974	609
17	772	927	1,440	1,040	583	966	1,250	763	1,500	1,550	970	601
18	983	839	1,420	1,050	636	1,140	1,050	835	1,530	1,480	1,330	476
19	995	879	1,390	1,020	635	840	747	791	1,520	1,420	1,360	473
20	849	770	1,350	1,020	778	828	746	1,350	1,630	1,700	1,180	500
21	824	716	1,360	945	1,470	789	713	1,300	1,520	2,130	1,040	878
22	808	706	1,290	748	1,730	772	1,010	1,210	1,420	2,480	1,060	898
23	615	870	1,680	717	1,500	1,020	1,030	915	1,190	1,570	976	890
24	859	1,970	1,490	713	1,520	1,270	949	753	1,210	1,500	953	535
25	738	2,050	1,420	763	1,220	1,190	993	770	1,190	1,310	1,000	308
26 27 28 29 30 31	673 538 451 863 536 860	1,690 1,540 1,480 1,420 1,330	1,400 1,380 1,360 1,350 1,330 1,320	709 679 572 701 663 612	1,030 1,000 1,160  	887 905 1,210 1,350 1,410 1,410	1,070 1,090 987 796 1,040	666 625 640 715 640 573	1,180 980 1,380 1,490 1,330	1,310 1,320 1,120 1,510 1,390 1,330	870 1,200 1,220 1,230 2,610 1,950	386 550 493 503 482
TOTAL	24,595	34,054	45,206	30,742	22,730	30,167	32,292	25,534	46,856	55,910	37,219	24,671
MEAN	793	1,135	1,458	992	812	973	1,076	824	1,562	1,804	1,201	822
MAX	1,130	2,050	2,030	1,710	1,730	1,410	1,720	1,350	6,900	3,180	2,610	1,820
MIN	393	521	936	572	441	648	713	573	553	1,120	870	308
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	2004 - 2005	, BY WATE	R YEAR (W	YY)			
MEAN	793	1,135	1,458	992	812	973	1,076	824	1,562	1,192	882	1,851
MAX	793	1,135	1,458	992	812	973	1,076	824	1,562	1,804	1,201	2,879
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)
MIN	793	1,135	1,458	992	812	973	1,076	824	1,562	580	564	822
(WY)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2004)	(2004)	(2005)
SUMMA	RY STATIS	STICS					FOR 200	5 WATER Y	<b>TEAR</b>	WATER	YEARS 200	4 - 2005
ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW								8 Sep 5 Sep 0 Jur 0.90 Jur	n 13 o 25 o 24 n 13 n 13 o 26	1,1 1,1 12,6 2 3 15,8	252 Au 337 Au 300 Se 13.26 Se	2005 2005 p 17, 2004 g 23, 2004 g 14, 2004 p 17, 2004 p 17, 2004 g 23, 2004

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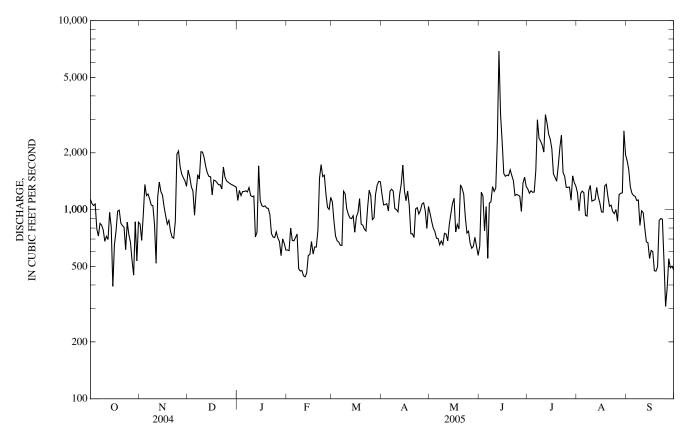
1,060

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Ι HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW 10 PERCENT EXCEEDS 50 PERCENT EXCEEDS 90 PERCENT EXCEEDS

\* See REMARKS.

# 03510577 TUCKASEGEE RIVER AT BARKERS CREEK, NC-Continued



### 03512000 OCONALUFTEE RIVER AT BIRDTOWN, NC

LOCATION.--Lat 35°27'41", long 83°21'13", Swain County, Hydrologic Unit 06010203, in Cherokee Indian Reservation on left bank 1500 ft upstream from bridge on Secondary Road 1359, 0.5 mi south of Birdtown, 0.6 mi downstream of Adams Creek, 0.6 mi upstream from Goose Creek, 2.2 mi southwest of Cherokee, and at mile 3.1.

DRAINAGE AREA.--184 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,843.30 ft above NGVD of 1929. Prior to Oct. 1, 1946, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS .-- No estimated daily discharges. Records fair. Maximum gage height for period of record from floodmarks. Minimum discharge for period of record also occurred Nov. 9, 1987. Minimum discharge for current water year also occurred Sept. 26.

EXTREMES OUTSIDE PERIOD OF RECORD .-- Floods of Nov. 19, 1906, and Mar. 27, 1913, reached stages of 18 and 14.5 ft, respectively, from studies by Tennessee Valley Authority; discharge not determined.

# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	315	1,900	543	394	649	635	717	392	426	441	567
2	414	315	1,190	547	393	580	1,660	627	507	375	365	474
3	393	444	982	536	574	548	1,120	577	409	402	350	419
4	366	1,280	846	531	473	528	1,030	540	404	381	355	378
5	349	871	743	519	446	549	1,010	516	370	467	327	353
6	334	626	877	544	439	510	971	499	407	453	343	328
7	322	530	1,330	529	435	520	926	470	454	1,920	358	309
8	310	470	1,110	783	440	1,200	838	452	406	1,130	416	294
9	302	424	1,860	638	452	871	746	436	401	727	379	278
10	296	395	1,910	579	470	770	678	539	415	598	390	264
11	285	387	1,570	550	423	715	630	499	447	618	322	254
12	281	821	1,270	529	406	665	628	452	527	626	292	245
13	332	695	1,120	608	430	652	889	446	1,050	617	352	238
14	300	570	993	1,450	567	705	1,030	436	652	616	454	231
15	289	515	894	815	534	652	819	474	539	564	323	225
16	270	480	819	708	555	699	737	454	474	562	319	275
17	257	452	763	628	576	717	681	407	432	524	306	249
18	255	427	716	569	501	638	641	387	460	637	593	221
19	463	405	686	548	472	602	605	372	456	805	596	211
20	378	397	633	530	511	573	572	1,120	710	709	431	204
21	314	372	612	516	1,630	549	546	746	612	614	375	199
22	291	359	595	497	1,310	558	566	590	466	551	374	195
23	278	548	1,120	459	962	992	630	532	439	483	344	190
24	314	2,080	850	457	943	748	562	491	402	437	329	186
25	289	1,890	733	440	810	668	519	462	378	406	321	182
26 27 28 29 30 31	272 288 308 428 392 339	1,240 988 917 762 709	681 634 605 585 569 555	450 424 398 428 445 408	711 652 723 	631 634 975 793 715 669	528 577 532 622 737	437 418 413 393 380 366	375 386 437 427 415	379 355 393 472 372 412	301 290 301 336 1,090 831	268 297 209 217 214
TOTAL	10,149	20,684	29,751	17,606	17,232	$21,275 \\ 686 \\ 1,200 \\ 510 \\ 3.73 \\ 4.30$	22,665	15,648	14,249	18,031	12,604	8,174
MEAN	327	689	960	568	615		756	505	475	582	407	272
MAX	463	2,080	1,910	1,450	1,630		1,660	1,120	1,050	1,920	1,090	567
MIN	255	315	555	398	393		519	366	370	355	290	182
CFSM	1.78	3.75	5.22	3.09	3.34		4.11	2.74	2.58	3.16	2.21	1.48
IN.	2.05	4.18	6.01	3.56	3.48		4.58	3.16	2.88	3.65	2.55	1.65
STATIST	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT		1945 - 2005	, <sup>@</sup> BY WAT	ER YEAR (	WY)			
MEAN MAX (WY) MIN (WY)	261 645 (1990) 94.5 (1955)	387 777 (1958) 125 (1988)	579 1,266 (1962) 162 (1966)	707 1,428 (1974) 170 (1981)	392	865 1,714 (1963) 330 (1988)	(1994) 277	1,202 (1984) 239	426 1,136 (1989) 175 (1988)	386 938 (1989) 169 (1952)	328 733 (1994) 152 (2002)	270 968 (2004) 121 (1954)

(1988)

(1966)

(1955)

(1981)

(1988)

(1986)

(1988)

(1952)

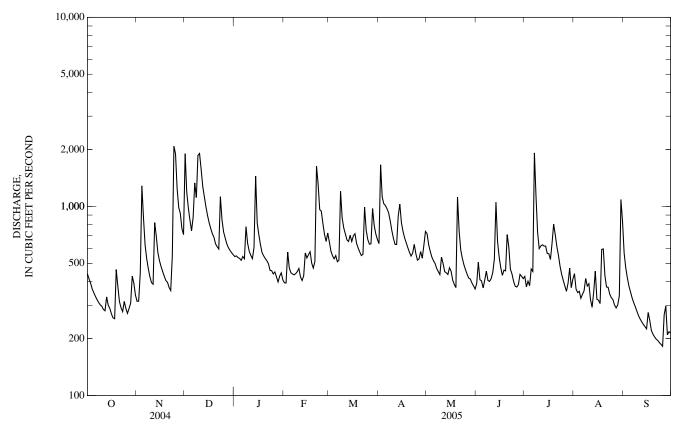
(2002)

(1954)

# 03512000 OCONALUFTEE RIVER AT BIRDTOWN, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDA	R YEAR FOR 2005 WATE	R YEAR WATER YEARS 1945 - 2005 <sup>@</sup>
ANNUAL TOTAL	210,388	208,068	
ANNUAL MEAN	575	570	521
HIGHEST ANNUAL MEAN			771 1994
LOWEST ANNUAL MEAN			274 1986
HIGHEST DAILY MEAN	5,900 Se	p 17 2,080 N	Nov 24 8,470 Mar 12, 1963
LOWEST DAILY MEAN			Sep 25 80 Nov 8, 1987
ANNUAL SEVEN-DAY MINIMUM			Sep 19 82 Oct 16, 1954
MAXIMUM PEAK FLOW			Dec 9 15,900 Dec 30, 1969
MAXIMUM PEAK STAGE		4.90 I	Dec 9 12.46* Dec 30, 1969
INSTANTANEOUS LOW FLOW		176*	Sep 25 79* Nov 8, 1987
ANNUAL RUNOFF (CFSM)	3.12	3.10	2.83
ANNUAL RUNOFF (INCHÉS)	42.53	42.07	38.47
10 PERCENT EXCEEDS	921	933	942
50 PERCENT EXCEEDS	460	499	397
90 PERCENT EXCEEDS	282	297	169

<sup>@</sup> See PERIOD OF RECORD.
 \* See REMARKS.



#### 03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC

LOCATION.--Lat 35°25'39", long 83°26'49", Swain County, Hydrologic Unit 06010203, on left bank 400 ft downstream of bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi downstream of Deep Creek, and at mile 12.6.

DRAINAGE AREA .-- 655 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

- PERIOD OF RECORD.--October 1897 to December 1981, October 1983 to January 1995, April 1996 to current year. Monthly discharge only for some periods, published in WSP 1306.
- REVISED RECORDS.--WSP 523: 1916, 1918-20. WSP 823: Drainage area. WSP 1306: 1898-1913. WSP 1336: 1907, 1915(M), 1916-20, 1921-29(M), 1933-34(M).
- GAGE.--Water-stage recorder. Datum of gage is 1,714.54 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Nov. 7, 1897, to Feb. 2, 1914, and May 18, 1920, to June 27, 1927, nonrecording gage at bridge 400 ft upstream at datum of 1,716.54 ft. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft upstream at datum of 1,716.54 ft. June 28, 1927, to Sept. 30, 1960, water-stage recorder at present site at datum of 1,716.54 ft. Satellite telemetry at station.
- REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation caused by power plants upstream from station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (stations 03507111, 03507131), and two small reservoirs with a combined capacity of 250 ft<sup>-/</sup>/s-day. Maximum discharge for period of record and minimum daily discharge for period of record and minimum daily discharge for period of record and minimum daily discharge for period of record also occurred Sept. 10, 1925, caused by filling reservoir on Oconaluftee River. Minimum daily discharge during normal regulation: 186 ft<sup>-/</sup>/s, Oct. 13, 1925.
- EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1840, Mar. 6, 1867, and June 1876 reached stages of 22, 19, and 19 ft, respectively, present site and datum, from studies by Tennessee Valley Authority; discharge not determined. The flood in May 1840 exceeded all other observed floods at this location.

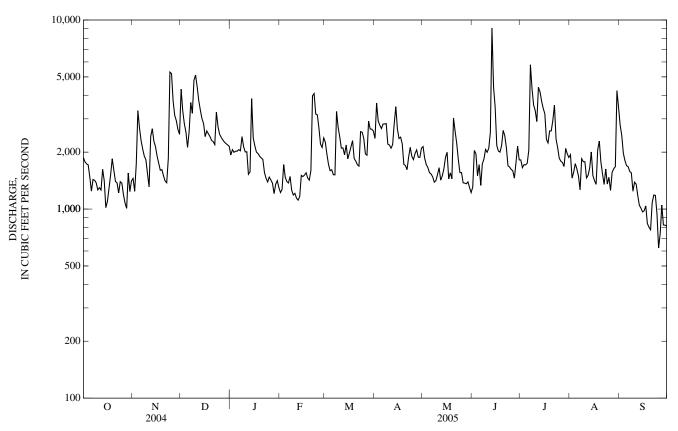
# DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,870	1,450	4,310	1,930	1,220	2,260	2,360	2,140	1,310	1,820	1,940	2,790
2	1,780	1,240	3,310	2,060	1,270	1,950	3,640	1,860	2,040	1,660	1,460	2,460
3	1,730	1,730	2,830	2,000	1,720	1,720	2,930	1,720	1,960	1,720	1,570	1,970
4	1,710	3,320	2,550	2,020	1,470	1,600	2,770	1,660	1,500	1,710	1,740	1,800
5	1,480	2,690	2,120	2,020	1,400	1,610	2,670	1,560	1,720	1,750	1,630	1,700
6	1,240	2,300	2,570	2,060	1,370	1,520	2,820	1,530	1,330	2,050	1,500	1,680
7	1,430	2,080	3,660	2,030	1,490	1,520	2,820	1,480	1,740	5,790	1,260	1,580
8	1,420	1,910	3,210	2,420	1,260	3,290	2,830	1,390	1,840	4,340	1,850	1,550
9	1,370	1,820	4,800	2,140	1,190	2,700	2,210	1,410	2,070	3,550	1,780	1,240
10	1,260	1,540	5,110	2,010	1,210	2,410	2,180	1,520	2,000	3,320	1,780	1,390
11	1,300	1,310	4,440	2,010	1,140	2,100	2,100	1,650	2,100	2,900	1,460	1,350
12	1,260	2,420	3,750	1,530	1,110	2,100	2,190	1,420	2,550	4,410	1,510	1,180
13	1,620	2,660	3,330	1,570	1,160	1,940	2,830	1,500	9,080	4,170	1,650	1,050
14	1,410	2,280	3,010	3,840	1,510	2,180	3,480	1,630	4,420	3,720	2,000	1,010
15	1,020	2,140	2,830	2,380	1,490	1,840	2,650	1,880	3,460	3,400	1,500	966
16	1,100	1,900	2,420	2,160	1,510	1,980	2,360	2,000	2,170	3,190	1,410	980
17	1,290	1,750	2,590	2,000	1,560	2,130	2,400	1,440	2,030	2,330	1,350	1,040
18	1,520	1,600	2,500	1,970	1,460	2,300	2,210	1,550	2,000	2,240	2,060	838
19	1,850	1,620	2,420	1,900	1,420	1,850	1,730	1,440	2,160	2,590	2,290	802
20	1,600	1,500	2,310	1,860	1,600	1,790	1,700	3,030	2,610	2,590	1,770	777
21	1,400	1,410	2,270	1,830	3,970	1,720	1,610	2,580	2,450	2,940	1,540	1,080
22	1,370	1,380	2,190	1,560	4,080	1,690	1,890	2,230	2,110	3,550	1,350	1,190
23	1,220	1,860	3,260	1,450	3,180	2,570	2,120	1,830	1,690	2,340	1,630	1,180
24	1,400	5,310	2,730	1,390	3,150	2,550	1,900	1,560	1,670	2,110	1,360	941
25	1,370	5,210	2,490	1,480	2,690	2,360	1,830	1,560	1,620	1,860	1,470	622
26 27 28 29 30 31	1,190 1,080 1,010 1,550 1,240 1,410	3,730 3,130 2,930 2,640 2,480	2,400 2,320 2,260 2,220 2,190 2,150	1,430 1,370 1,210 1,350 1,410 1,300	2,200 2,120 2,380 	1,960 1,930 2,920 2,650 2,650 2,580	1,970 2,060 1,880 1,880 2,100	1,380 1,370 1,360 1,390 1,300 1,220	1,590 1,460 1,760 2,150 1,820	1,790 1,760 1,680 2,090 1,960 1,870	1,250 1,560 1,630 1,680 4,230 3,460	740 1,050 824 822 813
TOTAL	43,500	69,340	90,550	57,690	51,330	66,370	70,120	51,590	68,410	83,200	54,670	37,415
MEAN	1,403	2,311	2,921	1,861	1,833	2,141	2,337	1,664	2,280	2,684	1,764	1,247
MAX	1,870	5,310	5,110	3,840	4,080	3,290	3,640	3,030	9,080	5,790	4,230	2,790
MIN	1,010	1,240	2,120	1,210	1,110	1,520	1,610	1,220	1,310	1,660	1,250	622
STATIST	TCS OF MO	ONTHLY M	EAN DATA	FOR WATI		1898 - 2005	<sup>@</sup> BY WAT	TER YEAR (	,			
MEAN	926	1,077	1,603	2,000	2,269	2,557	2,223	1,757	1,406	1,258	1,156	992
MAX	3,654	2,899	3,704	4,819	5,847	6,504	4,843	3,988	3,199	3,379	4,251	4,561
(WY)	(1899)	(1907)	(1933)	(1937)	(1899)	(1899)	(1920)	(2003)	(1909)	(1916)	(1901)	(2004)
MIN	347	378	457	599	736	926	841	602	531	503	220	195
(WY)	(1932)	(1932)	(1940)	(1940)	(1941)	(1988)	(1986)	(1941)	(1941)	(1925)	(1925)	(1925)

# 03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALE	ENDAR YEAR	FOR 2005 WAT	TER YEAR	WATER YEARS	1898 - 2005 <sup>@</sup>
SUMMARY STATISTICS ANNUAL TOTAL ANNUAL MEAN HIGHEST ANNUAL MEAN LOWEST ANNUAL MEAN HIGHEST DAILY MEAN LOWEST DAILY MEAN ANNUAL SEVEN-DAY MINIMUM MAXIMUM PEAK FLOW MAXIMUM PEAK STAGE INSTANTANEOUS LOW FLOW 10 PERCENT EXCEEDS	FOR 2004 CALE 696,512 1,903 23,500 684 774 3,140	Sep 17 Jun 21 Aug 14	FOR 2005 WAT 744,185 2,039 9,080 622 830 13,400 8.38 592 3,160	Jun 13 Sep 25 Sep 24 Jun 13 Jun 13 Sep 26	WATER YEARS 1,598 2,576 879 28,000 31* 97 61,600* 15.96 27* 2,840	1898 - 2005 <sup>w</sup> 1899 1986 Mar 4, 1917 Sep 9, 1925 Sep 4, 1925 Aug 30, 1940 Aug 30, 1940 Sep 10, 1925
50 PERCENT EXCEEDS 90 PERCENT EXCEEDS	1,480 975		1,840 1,240		1,270 610	

<sup>@</sup> See PERIOD OF RECORD.\* See REMARKS.



### 03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC-Continued

### PRECIPITATION RECORDS

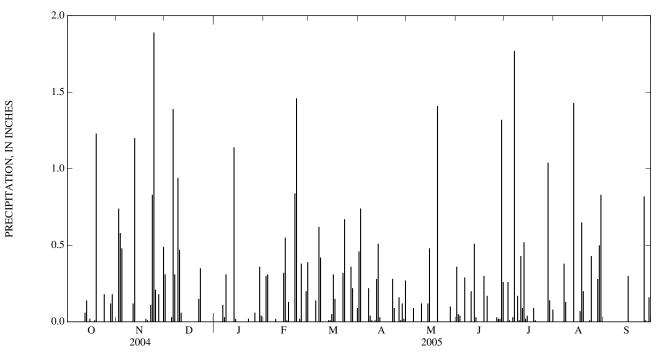
#### PERIOD OF RECORD.--October 1999 to current year.

GAGE.--Tipping-bucket raingage and electronic datalogger. Satellite telemetry at station.

REMARKS.--Gage is operated in cooperation with Tennessee Valley Authority and the North Carolina Department of Environment and Natural Resources. Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.

### PRECIPITATION, TOTAL, INCHES WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.31	0.00	0.00	0.00	0.46	0.00	0.36	0.00	0.00	0.00
2	0.00	0.74	0.00	0.00	0.30	0.00	0.74	0.00	0.05	0.00	0.00	0.00
3	0.00	0.58	0.00	0.00	0.31	0.00	0.00	0.00	0.04	0.26	0.00	0.00
4	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
5	0.00	0.00	0.03	0.00	0.00	0.14	0.00	0.09	0.00	0.00	0.00	0.00
6	0.00	0.00	1.39	0.11	0.00	0.00	0.00	0.00	0.29	0.03	0.00	0.00
7	0.00	0.00	0.31	0.03	0.00	0.62	0.22	0.00	0.00	1.77	0.38	0.00
8	0.00	0.00	0.00	0.31	0.02	0.42	0.04	0.00	0.00	0.00	0.13	0.00
9	0.00	0.00	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.17	0.00	0.00
10	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.12	0.20	0.01	0.00	0.00
11	0.00	0.12	0.06	0.00	0.00	0.00	0.01	0.00	0.00	0.43	0.00	0.00
12	0.06	1.20	0.00	0.00	0.00	0.00	0.28	0.00	0.51	0.09	0.00	0.00
13	0.14	0.00	0.00	1.14	0.32	0.01	0.51	0.00	0.03	0.52	1.43	0.00
14	0.00	0.00	0.00	0.02	0.55	0.01	0.03	0.12	0.00	0.02	0.00	0.00
15	0.02	0.00	0.00	0.00	0.01	0.05	0.00	0.48	0.00	0.04	0.00	0.00
16	0.00	0.00	0.00	0.00	0.13	0.31	0.00	0.00	0.00	0.00	0.00	0.30
17	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.07	0.00
18	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.65	0.00
19	1.23	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.20	0.00
20	0.00	0.01	0.00	0.00	0.84	0.00	0.00	1.41	0.17	0.01	0.00	0.00
21	0.00	0.00	0.00	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.11	0.15	0.02	0.00	0.32	0.28	0.00	0.00	0.00	0.00	0.00
23	0.00	0.83	0.35	0.00	0.02	0.67	0.09	0.00	0.00	0.00	0.01	0.00
24	0.18	1.89	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.43	0.00
25	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.06	0.00	0.00	0.16	0.00	0.03	0.00	0.00	0.82
27	0.00	0.18	0.00	0.00	0.20	0.36	0.01	0.00	0.02	0.00	0.00	0.01
28	0.12	0.00	0.00	0.00	0.39	0.22	0.12	0.10	0.02	1.04	0.28	0.00
29	0.18	0.00	0.00	0.36		0.00	0.02	0.00	1.32	0.14	0.50	0.16
30	0.00	0.49	0.00	0.04		0.00	0.27	0.00	0.26	0.00	0.83	0.00
31	0.00		0.00	0.00		0.09		0.00		0.08	0.00	
TOTAL	1.94	6.86	4.01	2.09	4.93	3.37	3.25	2.32	3.60	4.71	4.91	1.29



### 0351706800 CHEOAH RIVER NEAR BEARPEN GAP NEAR TAPOCO, NC

LOCATION.--Lat 35°26'49", long 83°56'22", Graham County, Hydrologic Unit 06010204, on right bank, 93 ft downstream of U.S. Forest Service bridge number 62 on Slickrock Road, 1.7 mi upstream of mouth, and 1.2 mi east southeast of Tapoco.

DRAINAGE AREA.--206 mi<sup>2</sup>.

#### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1999 to current year.

REVISED RECORDS .-- WDR NC-04-1: 2002(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,260 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

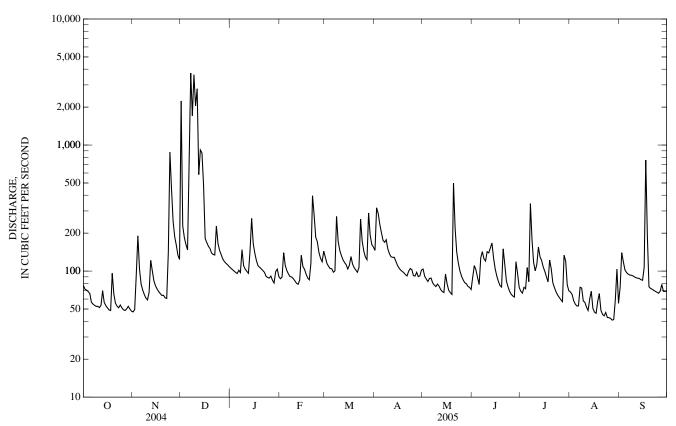
REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable regulation at times caused by Santeetlah Dam, 10.3 mi upstream. Water from Santeetlah Lake, 10.3 mi upstream, is diverted to hydro powerplant on the Little Tennessee River, which bypasses gage. Maximum discharge for period of record, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of step-backwater computation of peak flow. Minimum discharge for period of record also occurred Sept. 17, 20, 2000.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	47	2,240	106	87	129	146	104	90	69	68	74
2	72	49	228	103	90	115	318	91	111	67	65	140
3	71	94	185	100	140	109	286	86	102	74	58	119
4	69	190	162	98	111	105	234	83	89	72	55	102
5	66	104	147	96	101	104	202	87	78	107	53	97
6	57	79	725	102	95	98	175	88	127	82	53	95
7	55	71	3,720	97	90	101	169	81	143	343	74	93
8	53	65	1,710	148	90	272	177	77	125	177	73	93
9	52	61	3,610	110	87	173	150	75	120	117	58	92
10	53	59	2,040	103	84	146	137	79	143	100	56	90
11	51	68	2,790	100	80	133	130	76	140	113	52	88
12	54	122	582	96	79	123	129	71	153	155	49	88
13	70	101	914	144	85	117	129	69	167	130	60	87
14	56	84	866	262	133	112	120	68	127	121	69	85
15	53	76	482	165	109	104	111	95	104	108	51	85
16	51	72	181	138	103	111	106	79	91	99	47	107
17	49	69	168	121	94	131	102	70	83	90	46	759
18	49	66	158	110	88	114	99	67	77	82	57	189
19	96	64	151	107	85	106	97	65	75	122	66	75
20	66	64	139	104	115	102	94	499	150	104	49	73
21	56	61	136	101	396	98	91	220	113	81	45	72
22	53	61	134	98	280	107	100	142	84	74	44	70
23	51	141	228	91	186	259	105	116	75	68	47	69
24	54	878	166	e89	171	173	103	101	69	64	43	68
25	51	447	146	88	141	144	92	91	66	62	43	67
26 27 28 29 30 31	49 49 50 53 50 48	247 187 161 134 124	135 125 119 115 112 109	91 85 80 99 104 90	126 119 144  	129 123 289 193 162 155	91 98 90 92 102	85 81 80 76 74 71	63 62 119 95 74	59 57 134 120 78 70	42 41 41 59 103 56	69 78 69 69 69
TOTAL	1,784	4,046	22,723	3,426	3,509	4,337	4,075	3,147	3,115	3,199	1,723	3,331
MEAN	57.5	135	733	111	125	140	136	102	104	103	55.6	111
MAX	96	878	3,720	262	396	289	318	499	167	343	103	759
MIN	48	47	109	80	79	98	90	65	62	57	41	67
STATIST	TICS OF MC	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	2000 - 2005,	BY WATE	R YEAR (W	Y)			
MEAN	32.6	66.8	188	172	127	118	134	240	77.9	83.7	49.1	72.5
MAX	57.5	135	733	589	216	149	229	889	113	131	81.5	165
(WY)	(2005)	(2005)	(2005)	(2002)	(2003)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)	(2004)
MIN	12.1	26.7	31.5	65.8	77.3	79.7	64.3	53.2	52.5	41.0	22.7	19.9
(WY)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(2001)	(2001)	(2002)	(2002)	(2002)	(2000)

# 0351706800 CHEOAH RIVER NEAR BEARPEN GAP NEAR TAPOCO, NC-Continued

SUMMARY STATISTICS	FOR 2004 CAL	ENDAR YEAR	FOR 2005 WA	FER YEAR	WATER YEARS 2000 - 2005		
ANNUAL TOTAL	56,831		58,415		114		
ANNUAL MEAN HIGHEST ANNUAL MEAN	155		160		114 176	2003	
LOWEST ANNUAL MEAN					54.9	2001	
HIGHEST DAILY MEAN	3,720	Dec 7	3,720	Dec 7	8,350	May 6, 2003	
LOWEST DAILY MEAN	38	Sep 6	41	Aug 27	9.1	Sep 17, 2000	
ANNUAL SEVEN-DAY MINIMUM	43	Aug 31	43	Aug 22	9.8	Sep 14, 2000	
MAXIMUM PEAK FLOW			6,370	Dec 9	15,000*	May 6, 2003	
MAXIMUM PEAK STAGE			8.23	Dec 9	13.30	May 6, 2003	
INSTANTANEOUS LOW FLOW			37	Aug 28	8.8*	Sep 16, 2000	
10 PERCENT EXCEEDS	172		183	•	163	•	
50 PERCENT EXCEEDS	86		95		68		
90 PERCENT EXCEEDS	50		54		22		

\* See REMARKS. e Estimated



### 0351706800 CHEOAH RIVER NEAR BEARPEN GAP NEAR TAPOCO, NC-Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1999 to current year.

PERIOD OF DAILY RECORD .--

WATER TEMPERATURE: October 1999 to current year.

INSTRUMENTATION .-- Temperature probe since October 1999. Satellite telemetry at station.

REMARKS .-- Records good. Station operated in cooperation with Tapoco, Inc.

EXTREMES FOR PERIOD OF DAILY RECORD .--

WATER TEMPERATURE: Maximum recorded, 30.0°C, July 30, 2002; minimum recorded, 0°C, periodically in winter months.

ľ

EXTREMES FOR CURRENT YEAR.--WATER TEMPERATURE: Maximum recorded, 28.2°C, Aug. 21; minimum recorded, 0.0°C, Jan. 24.

# TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	(	OCTOBEF	ર	Ν	OVEMBE	ER	E	ECEMBE	ER		JANUARY	<u>(</u>
1	20.0	16.8	18.5	17.8	16.2	17.1	14.0	11.0	12.9	8.6	7.2	8.0
2	19.6	17.2	18.5	18.8	16.8	17.8	11.3	8.0	8.9	9.1	8.0	8.5
3	19.6	17.7	18.4	18.1	17.2	17.7	8.1	6.8	7.4	10.2	8.4	9.3
4	18.9	15.6	17.2	17.4	15.0	16.8	7.5	6.1	6.8	11.2	9.8	10.4
5	18.4	14.9	16.6	15.0	11.5	13.3	8.1	5.9	6.9	11.3	9.7	10.6
6	17.9	14.3	16.1	11.5	9.7	10.8	13.2	8.1	9.5	12.2	11.1	11.6
7	18.4	14.9	16.5	11.7	9.4	10.7	13.8	13.2	13.5	11.1	9.6	10.0
8	18.0	15.2	16.6	12.2	10.4	11.2	13.4	12.5	13.0	11.5	9.9	10.8
9	17.4	16.0	16.7	10.5	8.7	9.7	13.3	12.1	12.7	9.9	8.3	9.0
10	19.1	16.1	17.5	10.4	8.4	9.4	13.3	12.1	12.6	9.4	7.6	8.6
11	20.0	16.9	18.4	11.2	9.0	9.8	12.6	10.9	11.8	10.6	8.5	9.4
12	18.6	17.3	17.9	12.7	11.2	12.0	10.9	9.0	9.8	12.4	10.4	11.4
13	17.9	16.6	17.2	12.4	10.8	11.8	11.1	9.8	10.4	13.1	11.6	12.2
14	16.6	15.1	15.8	10.8	9.2	10.0	9.8	8.1	9.2	12.0	7.8	9.9
15	15.1	12.6	13.8	9.6	8.0	9.0	8.6	5.6	7.6	7.8	6.4	7.3
16	14.1	11.6	12.6	9.3	7.8	8.6	5.6	4.1	4.9	7.4	5.1	6.6
17	13.6	10.3	12.1	10.6	8.4	9.6	6.3	4.8	5.5	5.1	1.7	3.0
18	15.4	12.7	13.9	11.7	9.5	10.7	5.7	4.4	5.2	1.7	0.4	1.2
19	15.7	15.0	15.3	13.2	11.5	12.4	5.6	3.0	5.0	2.7	1.2	1.9
20	17.7	15.1	16.1	13.6	12.8	13.2	3.0	0.9	1.8	5.0	2.4	3.7
21	18.3	16.0	16.9	13.1	12.3	12.8	4.5	1.9	3.2	7.2	5.0	6.1
22	17.6	15.3	16.5	14.3	12.3	13.3	7.4	4.2	5.5	7.1	4.3	6.2
23	16.7	15.4	16.1	14.0	13.6	13.7	8.0	4.7	6.8	4.3	0.4	1.7
24	17.3	15.5	16.2	14.1	13.6	13.8	4.7	3.2	3.9	1.2	0.0	0.5
25	17.3	15.1	16.0	13.6	8.8	11.0	3.5	2.2	3.0	3.5	1.2	2.4
26 27 28 29 30 31	16.6 17.7 19.4 19.1 19.2 18.9	13.9 15.6 16.8 17.8 16.8 16.9	15.4 16.6 18.0 18.3 17.9 17.8	8.8 9.2 9.8 9.7 11.0	7.6 7.2 8.5 7.9 8.9	8.3 8.1 9.3 8.8 9.6	3.6 3.4 3.9 5.5 7.5 8.5	2.6 2.5 2.2 2.8 5.5 6.8	3.2 3.0 3.1 4.0 6.5 7.7	6.1 6.1 5.4 4.7 5.3 6.6	3.5 4.9 4.1 3.2 4.5 5.0	4.8 5.4 4.7 4.1 4.9 5.8
MONTH	20.0	10.3	16.5	18.8	7.2	11.7	14.0	0.9	7.3	13.1	0.0	6.8

# 0351706800 CHEOAH RIVER NEAR BEARPEN GAP NEAR TAPOCO, NC-Continued

# TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUAR			MARCH			APRIL			MAY	
1 2 3 4 5	7.2 6.7 6.4 6.9 6.3	6.0 5.6 6.0 5.2 4.1	6.5 6.1 6.2 6.0 5.4	6.4 5.6 6.1 7.0 8.9	3.8 2.5 2.8 3.3 6.3	5.0 4.0 4.4 5.3 7.4	14.0 13.1 12.0 12.9 14.5	11.8 8.5 7.8 8.2 9.6	12.8 10.0 9.6 10.5 11.9	16.1 14.5 15.3 15.1 12.8	11.6 10.2 9.8 9.7 11.2	13.6 12.4 12.4 12.3 11.7
6 7 8 9 10	7.2 8.0 8.8 9.8 9.3	4.6 5.9 7.9 8.5 4.6	6.0 6.9 8.3 9.1 6.9	9.5 8.4 8.4 6.8 8.1	5.9 5.6 5.2 4.0 5.0	7.7 7.2 6.8 5.4 6.6	14.8 14.8 15.3 17.5 18.2	11.2 12.8 12.5 12.6 13.2	13.0 13.6 13.8 14.9 15.6	16.9 17.7 18.5 19.3 17.1	11.3 11.9 12.8 14.3 15.1	13.6 14.7 15.6 16.7 15.7
11 12 13 14 15	4.9 5.9 6.1 7.6 9.2	2.8 2.8 4.6 6.1 6.7	4.0 4.4 5.2 6.8 7.9	7.4 10.0 12.6 11.0 9.5	5.9 5.5 8.4 8.5 6.4	6.6 7.6 10.4 9.7 8.1	17.1 15.9 14.6 16.1 16.0	14.0 14.2 13.2 11.6 10.6	15.7 14.8 13.8 13.6 13.3	20.4 21.5 20.2 19.2 17.9	14.3 15.7 16.8 17.4 15.9	16.9 18.4 18.6 18.3 17.1
16 17 18 19 20	9.4 8.5 6.3 6.1 6.5	8.5 5.8 3.8 3.6 5.7	8.9 7.3 5.1 5.1 6.1	8.4 7.2 9.8 8.6 11.7	7.2 6.6 6.1 6.1 7.5	7.6 6.9 7.7 7.6 9.4	16.1 15.9 17.1 17.1 18.4	11.2 10.5 11.4 12.6 13.2	13.6 13.2 14.2 15.0 15.7	19.2 20.1 20.0 21.4 19.0	13.7 13.8 15.2 16.1 14.8	16.3 16.8 17.5 18.6 16.1
21 22 23 24 25	8.6 11.0 10.3 10.6 9.7	6.5 8.4 7.8 9.2 7.4	7.7 9.5 9.2 9.7 8.5	10.7 10.2 12.0 13.1 14.1	7.7 8.2 9.7 9.5 9.5	9.4 9.4 10.7 11.1 11.7	16.3 15.5 14.8 11.2 13.7	13.4 13.8 11.2 8.7 7.9	14.9 14.7 13.1 9.8 10.6	18.9 18.8 19.5 18.4 17.5	14.2 15.1 16.4 15.3 13.3	16.2 16.9 17.8 16.7 15.4
26 27 28 29 30 31	8.5 7.4 7.4 	5.4 6.2 6.4	7.1 6.9 6.9 	14.6 14.4 13.3 13.4 14.6 13.7	10.6 12.4 9.6 9.0 9.6 12.1	12.5 13.3 11.2 11.0 12.1 12.7	12.2 12.4 11.2 13.6 14.6	9.8 9.7 9.1 10.5 13.0	11.1 11.1 10.4 11.9 13.7	19.2 20.4 19.7 17.0 17.3 18.8	13.0 14.5 15.3 14.3 14.5 15.1	15.9 17.2 17.3 15.2 15.6 16.9
MONTH	11.0	2.8	6.9	14.6	2.5	8.6	18.4	7.8	13.0	21.5	9.7	15.9
		JUNE			JULY			AUGUST		S	EPTEMBE	ER
1 2 3 4 5	17.7 18.4 17.8 22.1 22.7	16.3 15.5 16.5 16.2 17.8	16.9 16.8 17.1 18.8 20.2	26.2 25.5 23.2 23.9 24.8	21.8 20.8 21.2 20.2 20.5	23.7 22.9 21.9 22.0 22.6	25.3 26.2 26.2 26.8 24.8	20.8 21.1 21.0 21.4 21.6	22.8 23.3 23.5 23.9 23.2	25.2 25.3 25.5 24.7 24.8	20.5 21.6 21.9 20.6 21.0	22.6 23.3 23.5 22.6 22.7
6 7 8 9 10	24.5 21.2 19.8 20.2 21.3	18.7 17.5 17.7 17.4 18.0	20.9 19.2 18.7 18.6 19.4	22.7 20.8 22.0 22.0 21.8	20.8 18.0 17.3 18.0 19.3	21.5 18.9 19.3 19.9 20.4	25.2 23.0 22.4 24.2 26.4	21.1 20.3 19.9 20.3 21.3	22.9 21.4 20.9 22.2 23.5	24.3 24.4 24.5 24.5 24.5 24.3	20.6 20.3 20.3 20.5 20.2	22.4 22.1 22.3 22.3 22.1
11 12 13 14 15	19.7 19.3 21.1 23.3 24.2	18.3 18.5 18.1 18.1 19.2	19.0 18.9 19.2 20.3 21.3	21.2 21.1 20.3 20.2 21.9	19.7 19.0 19.2 19.0 19.0	20.3 20.0 19.7 19.6 20.3	26.9 26.9 26.1 26.0 27.3	21.7 21.6 22.2 21.2 21.9	23.9 24.0 23.8 23.3 24.3	24.5 24.4 24.4 24.2 25.1	20.7 20.7 20.7 20.6 21.3	22.4 22.5 22.5 22.4 23.1
16 17 18 19 20	23.1 23.0 21.4 21.4 20.1	18.4 18.0 16.7 17.2 16.9	20.6 20.3 19.1 19.3 18.3	22.5 24.0 24.0 24.0 25.4	20.0 20.2 20.2 20.7 19.8	21.1 21.7 21.9 21.9 22.2	27.6 27.4 27.7 26.3 27.9	22.5 23.3 23.0 22.1 22.8	24.8 25.1 24.7 23.9 25.0	23.5 25.7 24.9 24.0 24.3	21.9 21.5 22.1 20.2 20.8	22.6 23.4 23.4 22.1 22.6
21 22 23 24 25	20.7 22.1 24.1 24.6	16.0 17.3 18.2 19.2 20.0	18.0 19.5 20.9 21.8 22.3	26.0 25.9 26.8 26.3 27.5	21.3 21.9 21.5 21.6 22.0	23.4 23.6 23.9 23.9 24.5	28.2 27.2 26.0 27.9 25.6	23.6 23.6 23.3 22.6 23.3	25.7 25.2 24.4 25.0 24.2	24.7 24.9 24.6 24.5 25.0	21.1 21.5 21.6 21.3 22.1	22.9 23.2 23.1 23.0 23.2
	24.8	20.0										
26 27 28 29 30 31	24.8 22.9 25.2 23.4 25.0 26.4	20.7 20.0 20.3 19.7 21.2	21.7 22.3 22.0 22.1 23.5	28.0 28.0 25.6 23.2 23.8 24.5	22.8 23.1 21.1 20.5 20.7 21.0	25.2 25.3 23.5 21.6 22.1 22.6	24.7 24.6 25.0 23.8 23.0 25.6	21.7 21.9 21.6 21.9 21.5 21.2	23.1 23.2 23.3 22.9 22.3 22.9	23.0 24.1 23.0 22.4 21.1	21.8 20.9 20.7 19.7 17.9	22.3 22.3 22.0 21.3 19.6

### 03548330 BRASSTOWN CREEK NEAR BRASSTOWN, NC

LOCATION.--Lat 35°02'24", long 83°57'33", Clay County, Hydrologic Unit 06020002, on right bank 20 ft upstream from bridge on Secondary Road 1134, 0.1 mi northwest of Brasstown, and 0.8 mi above mouth.

DRAINAGE AREA.--83.1 mi<sup>2</sup>.

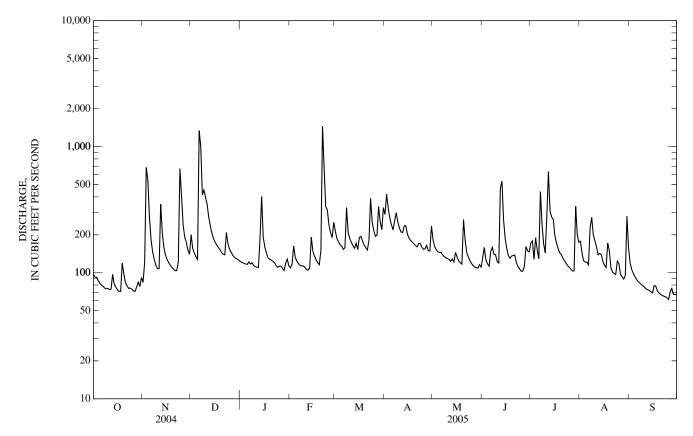
PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1947, 1953-55, 1960-64, 1988. July 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,581.70 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Minimum discharge for period of record also occurred Sept. 20, 2000. Minimum discharge for current water year also occurred Sept. 26.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	84	200	122	109	214	290	182	132	172	178	119
2	92	122	155	120	117	188	420	161	159	179	142	106
3	92	685	143	119	163	176	326	152	126	128	124	99
4	87	537	134	117	133	166	272	146	118	189	122	93
5	83	274	128	116	123	162	241	145	113	152	121	88
6	80	182	1,340	122	118	153	219	145	148	129	115	85
7	78	146	1,010	117	115	158	258	138	159	441	225	83
8	76	128	416	120	113	330	299	134	140	244	275	81
9	75	115	453	114	113	208	254	131	139	170	201	79
10	75	108	395	112	111	187	226	129	123	144	179	77
11	74	108	348	111	106	174	211	127	119	283	161	74
12	74	350	275	110	105	164	208	123	468	635	139	73
13	97	207	235	188	110	156	235	129	533	309	142	72
14	81	158	204	403	192	172	236	122	264	277	139	71
15	77	138	186	191	147	153	202	145	188	266	123	69
16	73	128	174	160	136	190	188	133	155	198	115	79
17	71	120	166	143	127	194	180	124	137	173	110	78
18	71	115	159	132	120	178	175	120	130	156	172	72
19	119	110	153	128	116	166	170	117	136	144	150	69
20	98	107	144	126	150	158	165	264	137	140	110	68
21	83	104	140	124	1,460	152	161	184	138	131	101	66
22	79	104	139	120	677	181	171	144	120	125	99	65
23	75	122	209	114	334	389	171	133	112	119	97	65
24	76	669	169	111	315	252	160	125	107	114	124	63
25	74	408	154	113	241	216	153	118	103	110	118	61
26 27 28 29 30 31	72 71 77 84 78 92	241 192 174 151 140	145 137 133 130 128 125	113 109 104 119 128 114	208 190 251 	194 199 335 253 220 329	155 165 150 149 234	114 111 110 109 116 111	103 112 162 149 146	107 103 103 337 200 174	97 93 89 95 280 158	70 75 67 67 67 67
TOTAL	2,531	6,227	8,027	4,140	6,200	6,367	6,444	4,242	4,876	6,152	4,394	$2,301 \\ 76.7 \\ 119 \\ 61 \\ 0.92 \\ 1.03$
MEAN	81.6	208	259	134	221	205	215	137	163	198	142	
MAX	119	685	1,340	403	1,460	389	420	264	533	635	280	
MIN	71	84	125	104	105	152	149	109	103	103	89	
CFSM	0.98	2.50	3.12	1.61	2.66	2.47	2.58	1.65	1.96	2.39	1.71	
IN.	1.13	2.79	3.59	1.85	2.78	2.85	2.88	1.90	2.18	2.75	1.97	
STATIS	FICS OF MO	ONTHLY M	EAN DATA	FOR WAT								
MEAN	57.1	103	120	119	151	146	145	169	112	106	70.8	93.9
MAX	81.6	208	259	150	221	205	215	403	163	198	142	226
(WY)	(2005)	(2005)	(2005)	(2002)	(2005)	(2005)	(2005)	(2003)	(2005)	(2005)	(2005)	(2004)
MIN	27.2	41.2	46.8	94.5	98.2	113	88.1	60.3	61.2	47.9	33.1	30.7
(WY)	(2001)	(2002)	(2001)	(2001)	(2002)	(2004)	(2001)	(2001)	(2002)	(2000)	(2000)	(2000)
SUMMA	RY STATIS	STICS		FOR 2004 C	ALENDAR	YEAR	FOR 200	5 WATER Y	YEAR	WATER	YEARS 199	9 - 2005
ANNUA HIGHES LOWES' LOWES' ANNUA MAXIM MAXIM INSTAN ANNUA 10 PERC 50 PERC	UM PEAK I UM PEAK S	MEAN IEAN EAN DAY MINIM FLOW STAGE LOW FLOW (CFSM) (INCHES) EDS EDS		FOR 2004 CALENDAR YEAR 49,042 134 2,430 Sep 17 33 Apr 12 45 Aug 14 1.61 21.95 202 92 57			61,901 170 1,460 Feb 21 61 Sep 25 65 Sep 19 4,350 Dec 6 14.55 Dec 6 58* Sep 25 2.04 27.71 273 136 78			118 170 2005 72.5 2001 2,540 May 7, 2003 18 Sep 16, 2000 19 Sep 14, 2000 4,570 May 7, 2003 14.94 May 7, 2003 17* Sep 16, 2000 1.42 19.36 194 92 43		

# 03548330 BRASSTOWN CREEK NEAR BRASSTOWN, NC-Continued



#### 03550000 VALLEY RIVER AT TOMOTLA, NC

LOCATION.--Lat 35°08'20", long 83°58'50", Cherokee County, Hydrologic Unit 06020002, on right bank at site of former bridge on Secondary Road 1473 at Tomotla, 600 ft upstream from bridge on U.S. Highways 19 and 74, 0.2 mi upstream from Rogers Creek, 4.7 mi northeast of Murphy, and at mile 6.6.

DRAINAGE AREA.--104 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1904 to December 1909, January 1914 to April 1917, October 1918 to current year.

REVISED RECORDS.--WSP 503: 1905-9, 1915-17. WSP 823: Drainage area. WSP 1306: 1917(M), 1920(M), 1922(M), 1925(M), 1930(M), 1933(M). WSP 1626: 1907(M). WDR NC-97-1: 1979-1994(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,556.46 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Prior to May 11, 1934, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record, from flood profile by Tennessee Valley Authority, from rating curve extended above 5,800 ft<sup>3</sup>/s on basis of slope-conveyance study. Minimum discharge for period of record occurred several days in Aug. and Sept. 1925. Minimum discharge for current water year also occurred Sept. 26.

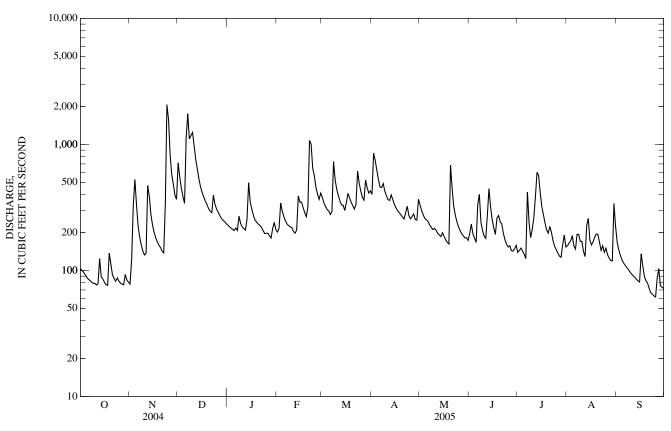
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1898 reached a stage of 21.2 ft, from floodmark by Tennessee Valley Authority; discharge, about 20,000 ft<sup>3</sup>/s.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	78	714	229	202	380	401	331	197	139	157	169
2	100	123	554	222	216	343	853	297	232	144	165	146
3	97	327	450	217	342	322	747	276	195	150	172	132
4	92	526	386	212	295	304	626	258	180	142	189	121
5	88	335	340	207	267	296	527	252	167	134	156	115
6	85	226	1,120	217	247	278	459	244	333	124	148	110
7	83	184	1,750	208	233	293	454	230	401	419	193	105
8	81	159	1,110	269	227	731	488	219	241	244	194	102
9	79	142	1,180	236	221	523	426	211	207	182	170	97
10	79	133	1,240	222	218	439	391	216	187	212	170	94
11	77	137	969	215	203	392	364	208	180	262	141	91
12	78	471	757	209	197	355	360	197	274	386	129	88
13	124	390	634	255	210	330	396	191	446	600	228	85
14	89	279	530	496	390	329	364	185	319	565	258	83
15	86	230	459	349	348	299	334	199	254	414	173	81
16	81	201	415	306	349	345	313	186	217	320	160	135
17	77	182	382	273	316	409	298	175	194	276	169	109
18	76	168	354	251	288	376	288	167	261	237	183	90
19	137	158	333	242	268	348	276	162	273	209	195	83
20	113	152	309	233	319	326	265	685	243	198	193	79
21	92	142	295	228	$1,080 \\ 1,000 \\ 646 \\ 563 \\ 459$	306	256	451	233	224	167	72
22	86	138	287	220		333	287	322	197	200	144	66
23	82	335	396	208		614	323	274	175	172	157	65
24	87	2,060	334	196		493	273	243	161	155	139	63
25	83	1,580	307	197		426	257	222	153	146	150	61
26 27 28 29 30 31	79 78 77 93 84 81	831 579 486 395 367	290 273 259 250 244 235	197 188 181 215 241 211	403 366 411 	380 361 521 452 411 428	267 281 253 250 367	207 195 188 181 182 173	157 144 142 148 158	137 130 127 159 190 153	134 125 120 119 340 225	87 103 76 74 72
TOTAL	2,747	11,514	17,156	7,350	10,284	12,143	11,444	7,527	6,669	7,150	5,363	2,854
MEAN	88.6	384	553	237	367	392	381	243	222	231	173	95.1
MAX	137	2,060	1,750	496	1,080	731	853	685	446	600	340	169
MIN	76	78	235	181	197	278	250	162	142	124	119	61
CFSM	0.85	3.69	5.32	2.28	3.53	3.77	3.67	2.33	2.14	2.22	1.66	0.91
IN.	0.98	4.12	6.14	2.63	3.68	4.34	4.09	2.69	2.39	2.56	1.92	1.02
STATIST	TICS OF MO	ONTHLY M	EAN DATA	FOR WAT	ER YEARS	1904 - 2005,	<sup>@</sup> BY WAT	ER YEAR (	WY)			
MEAN	98.8	162	291	393	451	455	365	264	191	170	136	104
MAX	442	685	1,045	936	1,022	1,379	835	755	607	443	563	434
(WY)	(1907)	(1930)	(1933)	(1974)	(1957)	(1917)	(1936)	(1929)	(1989)	(1949)	(1920)	(1928)
MIN	25.2	38.6	57.4	69.9	92.7	155	135	88.9	44.8	42.4	24.6	21.3
(WY)	(1955)	(1934)	(1934)	(1981)	(1941)	(1988)	(1986)	(1941)	(1988)	(1988)	(1925)	(1925)

# 03550000 VALLEY RIVER AT TOMOTLA, NC-Continued

SUMMARY STATISTICS	FOR 2004 CALENDA	R YEAR FOR 20	005 WATER YEAR	WATER YEARS	1904 - 2005 <sup>@</sup>
ANNUAL TOTAL	91,123	102,	201		
ANNUAL MEAN	249		280	256	
HIGHEST ANNUAL MEAN				379	1922
LOWEST ANNUAL MEAN				111	1988
HIGHEST DAILY MEAN	2,060 No	ov 24 2,	060 Nov 24	8,190	Feb 16, 1995
LOWEST DAILY MEAN	60 Se	ep 6	61 Sep 25	12	Aug 27, 1925
ANNUAL SEVEN-DAY MINIMUM		ig 31	70 Sep 19	13	Aug 24, 1925
MAXIMUM PEAK FLOW		3,	440 Nov 24	18,000*	Nov 19, 1906
MAXIMUM PEAK STAGE			9.50 Nov 24	20.50	Nov 19, 1906
INSTANTANEOUS LOW FLOW			58* Sep 25	12*	Aug 27, 1925
ANNUAL RUNOFF (CFSM)	2.39		2.69	2.46	U ·
ANNUAL RUNOFF (INCHÉS)	32.59		36.56	33.44	
10 PERCENT EXCEEDS	416		464	496	
50 PERCENT EXCEEDS	192		222	179	
90 PERCENT EXCEEDS	84		88	60	

<sup>@</sup> See PERIOD OF RECORD.
 \* See REMARKS.



# LAKES AND RESERVOIRS IN OHIO RIVER BASIN

### 03514500 FONTANA LAKE

LOCATION.--Lat 35°27'07", long 83°48'18", Graham County, Hydrologic Unit 06010202, at Fontana Dam on Little Tennessee River, 9.6 mi upstream from Cheoah Dam, 5.7 mi upstream from Twenty Mile Creek, 9.0 mi north of Robbinsville, and at river mile 61.0. DRAINAGE AREA.--1.571 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1944 to current year. Prior to November 1944, monthend content only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by gravity, nonoverflow-type concrete dam. Spillway is equipped with four radial gates 35 ft high by 35 ft wide. Filling began Nov. 7, 1944; dam completed March 1945; water in reservoir first reached minimum pool elevation Jan. 16, 1945. Total capacity (based on 1967 resurvey) is 727,500 ft<sup>3</sup>/s-day, at 1,710.0 ft (top of gate) of which 476,900 ft<sup>3</sup>/s-day is controlled storage above 1,580.0 ft, normal minimum pool elevation. Reservoir is used for navigation, flood control, and power. New capacity table put into use Jan. 1, 1971.

COOPERATION .-- Records furnished by Tennessee Valley Authority.

- EXTREMES FOR PERIOD OF RECORD.--Maximum content observed: 728,600 ft<sup>3</sup>/s-day, May 28, 1973; elevation, 1,710.20 ft. Minimum content observed (after first filling): 78,300 ft<sup>3</sup>/s-day, Jan. 29, 1955; elevation, 1,472.0 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum content observed: 710,200 ft<sup>3</sup>/s-day, June 15; elevation, 1,706.76 ft. Minimum content observed: 449,800 ft<sup>3</sup>/s-day, Jan. 30; elevation, 1,648.04 ft.

## 03546500 CHATUGE LAKE

LOCATION.--Lat 35°01'04", long 83°47'27", Clay County, Hydrologic Unit 06020002, at Chatuge Dam on Hiwassee River, 2.0 mi upstream from Hyatt Mill Creek, 2.5 mi downstream from Georgia-North Carolina Stateline, 2.4 mi southeast of Hayesville, and at river mile 121.0. DRAINAGE AREA.--189 mi<sup>2</sup>.

PERIOD OF RECORD .-- February 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Aug. 4, 1942, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a rolled, earthfill dam with side-channel spillway equipped with flashboards. Dam completed and filling began Feb. 12, 1942; water in reservoir first reached minimum pool elevation Feb. 26, 1942. Total capacity (based on 1965 resurvey) is 121,200 ft<sup>3</sup>/s-day, at 1,928.0 ft (top of flashboard), of which 61,700 ft<sup>3</sup>/s-day is controlled storage above 1,905.0 ft, normal minimum pool elevation. Reservoir is used for navigation, flood control, and power. New capacity table put into use Jan. 1, 1971.

COOPERATION--Records furnished by Tennessee Valley Authority. (See station 03548500.)

- EXTREMES FOR PERIOD OF RECORD.--Maximum content observed: 124,200 ft<sup>3</sup>/s-day, Apr. 20, 1943; elevation, 1,927.80 ft. Minimum content observed (after first filling): 9,400 ft<sup>3</sup>/s-day, Sept. 5, 1947, and Jan. 27, 1956; elevation, 1,860.11 ft, Sept. 5, 1947.
- EXTREMES FOR CURRENT YEAR.--Maximum content observed: 118,000 ft<sup>3</sup>/s-day, June 14; elevation, 1,927.08 ft. Minimum content observed: 85,800 ft<sup>3</sup>/s-day, Feb. 18; elevation, 1,916.56 ft.

### 03554500 HIWASSEE LAKE

LOCATION.--Lat 35°09'01", long 84°10'40", Cherokee County, Hydrologic Unit 06020002, at Hiwassee Dam on Hiwassee River, 3.9 mi upstream from Shoal Creek, 0.3 mi northwest of village of Hiwassee Dam, and at river mile 75.8.

DRAINAGE AREA.--968 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.63 ft below sea level.

REMARKS--Reservoir is formed by gravity overflow concrete dam with seven taintor gates 23 ft high by 32 ft wide. Slight filling began Apr. 13, 1939, during construction; systematic filling operation began Jan. 14, 1940; dam completed February 1940; water in reservoir and first reached minimum pool elevation Feb. 23, 1940. Total capacity (based on 1965 resurvey) is 218,800 ft<sup>3</sup>/s-day at 1,526.5 ft (top of gate), of which 154,300 ft<sup>3</sup>/s-day is controlled storage above 1,450.0 ft, normal minimum pool elevation. Reservoir is used for navigation, floodcontrol, and power. New capacity table put into use Jan. 1, 1971.

COOPERATION .-- Records furnished by Tennessee Valley Authority.

- EXTREMES FOR PERIOD OF RECORD.--Maximum content observed: 223,400 ft<sup>3</sup>/s-day, May 28, 1973; elevation, 1,528.02 ft. Minimum content observed (after first filling): 35,800 ft<sup>3</sup>/s-day, Jan. 28, 1948; elevation, 1,413.41 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum content observed: 211,800 ft<sup>3</sup>/s-day, June 21; elevation, 1,524.35 ft. Minimum content observed: 104,600 ft<sup>3</sup>/s-day, Feb. 14; elevation, 1,478.99 ft.

# LAKES AND RESERVOIRS IN OHIO RIVER BASIN--Continued

### **OTHER RESERVOIRS**

The following reservoirs in the Tennessee River basin are described below. Records of content are not published herein.

# 03447832 LAKE JULIAN

LOCATION.--Lat 35°28'37", long 82°32'51", Buncombe County, Hydrologic Unit 06010105, on Powell Creek near Skyland. DRAINAGE AREA.--4.78 mi<sup>2</sup>.

PERIOD OF RECORD.--Prior to November 1967 published as Asheville Steam-Electric Generating Plant Lake.

REMARKS.--Total capacity is 4,540 ft<sup>3</sup>/s-day, of which 2,120 ft<sup>3</sup>/s-day is controlled storage. Filling began Mar. 27, 1963, and lake reached spillway elevation, 2,160 ft, June 3, 1963. Most of initial storage and occasional, supplemental storage provided by pumped diversion from French Broad River. Lake is a cooling-water reservoir for Carolina Power and Light Co. plant.

## 03448959 BURNETT LAKE

LOCATION.--Lat 35°39'41", long 82°20'45", Buncombe County, Hydrologic Unit 06010105, on North Fork Swannanoa River near Black Mountain.

DRAINAGE AREA.--22 mi<sup>2</sup>.

REMARKS.--Total capacity at crest of spillway is 11,600 ft<sup>3</sup>/s-day, of which 8,900 ft<sup>3</sup>/s-day is controlled storage. Filling began Jan. 28, 1954. Lake is part of Asheville's municipal water supply. (See station 03451000.)

## 03450134 BEETREE RESERVOIR

LOCATION.--Lat 35°38'28", long 82°24'04", Buncombe County, Hydrologic Unit 06010105, on Beetree Creek near Swannanoa. DRAINAGE AREA.-7.62 mi<sup>2</sup>.

REMARKS.--Total capacity is 844 ft<sup>3</sup>/s-day, of which 823 ft<sup>3</sup>/s-day is controlled storage. Dam completed December 1926, and filling began Jan. 11, 1927; water in reservoir first reached maximum pool elevation Mar. 8, 1927. Lake is part of Asheville's municipal water supply. (See station 03451000.)

## 03455773 LAKE LOGAN

LOCATION.--Lat 35°25'17", long 82°55'29", Haywood County, Hydrologic Unit 06010106, on West Fork Pigeon River near Canton and at river mile 7.0.

DRAINAGE AREA.--33.3 mi<sup>2</sup>.

REMARKS.--Total capacity is 1,040 ft<sup>3</sup>/s-day (top of flashboards), all of which is usable. Filling began November 1931. (See station 0345577330.)

#### 03458319 LAKE JUNALUSKA

LOCATION.--Lat 35°31'39", long 82°57'49", Haywood County, Hydrologic Unit 06010106, on Richland Creek at Lake Junaluska and at river mile 2.4.

DRAINAGE AREA.--63.6 mi<sup>2</sup>.

REMARKS.--Total surface area is about 195 acres. The lake reached spillway elevation in the spring of 1913.

# 03460242 WATERVILLE LAKE

LOCATION.--Lat 35°41'41", long 83°03'02", Haywood County, Hydrologic Unit 06010106, at Waterville Dam on Pigeon River, 0.1 mi downstream from Cataloochee Creek, 5.5 mi southeast of Mount Sterling, and at river mile 38.0.

DRAINAGE AREA.--455 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year. Prior to October 1979, published as Lake Walters.

REMARKS.--Reservoir is formed by a single-arch, variable-radius, concrete dam with 14 taintor gates 10 ft high by 24 ft wide. Dam was completed in 1929 and filling began October 1929; water in reservoir first reached minimum pool elevation November 1929. Total capacity is 12,800 ft<sup>3</sup>/s-day at 2,258.60 ft (top of gate), of which 10,400 ft<sup>3</sup>/s-day is controlled storage above 2,175 ft, normal minimum pool elevation. Reservoir is used for power. Prior to Jan. 1, 1971, records furnished by Carolina Power and Light Co. New capacity table was put into use Jan. 1, 1971.

#### 03500466 SEQUOYAH LAKE

LOCATION.--Lat 35°04'02", long 83°13'31", Macon County, Hydrologic Unit 06010202, on Cullasaja River near Highlands, and at river mile 18.4.

DRAINAGE AREA.--14.4 mi<sup>2</sup>.

REMARKS.--Total capacity is 233 ft<sup>3</sup>/s-day (at crest of spillway), of which approximately 116 ft<sup>3</sup>/s-day is usable. Filling began in 1926.

# LAKES AND RESERVOIRS IN OHIO RIVER BASIN-Continued

### 03504500 NANTAHALA LAKE

LOCATION.--Lat 35°11'58", long 83°39'05", Macon County, Hydrologic Unit 06010202, at Nantahala Dam on Nantahala River, 5.5 mi upstream from Whiteoak Creek, 4.2 mi southeast of Topton, and at river mile 22.8.

DRAINAGE AREA.--91.0 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1942 to September 1995. Prior to October 1944 monthend content only, published in WSP 1306.

REMARKS.--Reservoir is formed by rockfill dam with side-channel, gate-controlled spillway supplemented by fuse-plug dam. Dam completed and filling began Jan. 30, 1942; water in reservoir first reached minimum pool elevation Feb. 16, 1942. Total capacity (based on 1969 resurvey) is 69,200 ft<sup>3</sup>/s-day at 2,890.0 ft (top of gates), of which 63,500 ft<sup>3</sup>/s-day is controlled storage above 2,758.84 ft, normal minimum pool elevations. Reservoir is used for flood control and power. New capacity table put into use Jan. 1, 1971.

# 03507111; 03507131 EAST FORK LAKE AND WOLF CREEK LAKE

These two reservoirs are operated as a unit for storage of water for the Tennessee Creek Project.

# EAST FORK DAM

LOCATION.--Lat 35°12'49", long 83°00'07", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee. DRAINAGE AREA.--25.1 mi<sup>2</sup>.

REMARKS.--Total capacity of East Fork Lake is 671 ft<sup>3</sup>/s-day, of which 625 ft<sup>3</sup>/s-day is controlled storage. Filling began April 18, 1955.

# WOLF CREEK DAM

LOCATION.--Lat 35°13'18", long 83°00'00", Jackson County, Hydrologic Unit 06010203, on Wolf Creek near Tuckasegee. DRAINAGE AREA.--15.2 mi<sup>2</sup>.

REMARKS.--Total capacity of Wolf Creek Lake is 5,070 ft<sup>3</sup>/s-day, of which 3,850 ft<sup>3</sup>/s-day is controlled storage. Filling began Mar. 22, 1955.

# 03507216 BEAR CREEK LAKE

LOCATION.--Lat 35°14'27", long 83°04'23", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee. DRAINAGE AREA.--74.8 mi<sup>2</sup>.

REMARKS.--Total capacity is 17,500 ft<sup>3</sup>/s-day, of which 2,290 ft<sup>3</sup>/s-day is controlled storage. Filling began Oct. 9, 1953.

# 03507289 CEDAR CLIFF LAKE

LOCATION.--Lat 35°15'12", long 83°05'58", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee and at river mile 51.9.

DRAINAGE AREA.--80.3 mi<sup>2</sup>.

REMARKS.--Total capacity is 3,200 ft<sup>3</sup>/s-day, of which 350 ft<sup>3</sup>/s-day is controlled storage. Filling began Apr. 26, 1952.

## 03507500 THORPE RESERVOIR

- LOCATION.--Lat 35°11'46", long 83°09'10", Jackson County, Hydrologic Unit 06010203, at Thorpe Dam on West Fork Tuckasegee River, 3.0 mi upstream from Shoal Creek, and 2.3 mi northwest of Glenville, and at river mile 9.7.
- DRAINAGE AREA.--36.7 mi<sup>2</sup>.
- PERIOD OF RECORD.--February 1941 to September 1995. Prior to October 1944 monthend content only, published in WSP 1306. Prior to October 1948, published as Glenville Reservoir.
- REMARKS.--Reservoir is formed by earth and rock dam and six 40 ft fuse-plug dams with side-channel spillway equipped with two taintor gates 12 ft high by 25 ft wide. Dam completed and storage began Feb. 12, 1941. Water in reservoir first reached minimum pool elevation Mar. 15, 1941. Total capacity (based on 1969 resurvey) is 35,500 ft<sup>3</sup>/s-day, at 3,100.0 ft (top of gate), of which 33,700 ft<sup>3</sup>/s-day is controlled storage above 3,023.25 ft, normal minimum pool elevation. Reservoir is used for flood control and power. New capacity table put into use Jan. 1, 1971.

### 03515152 CHEOAH LAKE

LOCATION.--Lat 35°26'54", long 83°56'11", Graham County, Hydrologic Unit 06010202, on Little Tennessee River at Cheoah and at river mile 51.4.

DRAINAGE AREA.--1,608 mi<sup>2</sup>.

REMARKS.--Total capacity is 17,700 ft<sup>3</sup>/s-day, of which 920 ft<sup>3</sup>/s-day is controlled storage. Filling began Dec. 8, 1918.

# 03516500 SANTEETLAH LAKE

LOCATION.--Lat 35°22'38", long 83°52'33", Graham County, Hydrologic Unit 06010204, at Santeetlah Dam on Cheoah River, 1.0 mi downstream from Santeetlah Creek, 5.5 mi northwest of Robbinsville, and at river mile 9.3.

DRAINAGE AREA.--176 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1927 to September 1995. Prior to October 1946 monthend content only, published in WSP 1306.

REMARKS.--Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by six taintor gates 12 ft high by 25 ft wide. Dam completed and filling began Dec. 7, 1927. Water in reservoir first reached minimum pool elevation December 1927. Total capacity (new capacity table put into use Jan. 1, 1971) is 78,800 ft<sup>3</sup>/s-day (top of gate) at elevation 1,817.0 ft, of which 66,600 ft<sup>3</sup>/s-day is controlled storage above 1,740.08 ft, normal minimum pool elevation. Reservoir is used for power.

# LAKES AND RESERVOIRS IN OHIO RIVER BASIN--Continued

# 03555500 APPALACHIA LAKE

LOCATION.--Lat 35°10'04", long 84°17'49", Cherokee County, Hydrologic Unit 06020002, at Appalachia Dam on Hiwassee River, 9.8 mi downstream from Hiwassee Dam, 0.1 mi upstream from North Carolina-Tennessee State line, 1.5 mi northeast of Farner, Tennessee, and at river mile 66.0.

DRAINAGE AREA.--1,018 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1943 to September 1995.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with 10 radial gates. Dam completed and filling began Feb. 14, 1943; water in reservoir first reached minimum pool elevation Feb. 21, 1943. Total capacity (based on 1965 resurvey) is 29,100 ft<sup>3</sup>/s-day at 1,280.0 ft (top of gate), of which 4,400 ft<sup>3</sup>/s-day is controlled storage above 1,272.0 ft, normal minimum pool elevation. Reservoir is used for navigation, flood control, and power. New capacity table put into use Jan. 1, 1971.

# LAKES AND RESERVOIRS IN OHIO RIVER BASIN--Continued

# MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)
		03514500 Fontana Lake			03546500 Chatuge Lake	
Sept. 30 Oct. 31 Nov. 30 Dec. 31 CAL YR 2004		658,200 597,100 544,400 491,000 	-61,100 -52,700 -53,400 35,800	1,923.35 1,919.33 1,920.24 1,919.04	105,500 93,400 96,000 92,600 	-12,100 2,600 -3,400 15,100
Jan. 31 Feb. 28 Mar. 31 Apr. 30 June 30 July 31 Aug. 31 Sept. 30 WTR YR 2005	1,656.67 1,667.74 1,690.49 1,703.20 1,703.49 1,703.12 1,700.95	450,600 482,500 527,000 628,200 691,500 693,100 691,100 679,900 597,200	$\begin{array}{r} -40,400\\ 31,900\\ 44,500\\ 101,200\\ 63,300\\ 1,600\\ -2,000\\ -11,200\\ -82,700\\ -61,000\end{array}$	$\begin{array}{c} 1,917.66\\ 1,918.27\\ 1,920.60\\ 1,924.41\\ 1,925.98\\ 1,925.41\\ 1,925.37\\ 1,924.71\\ 1,921.09\end{array}$	88,700 90,400 97,100 108,900 114,200 112,200 112,100 109,900 98,600	-3,900 1,700 6,700 11,800 5,300 -2,000 -100 -2,200 -11,300 -6,900
Date	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)			
		03554500 Hiwasee Lake				
Sep. 30 Oct. 31 Nov. 30 Dec. 31 CAL YR 2004		163,700 141,700 140,700 120,300 	-22,000 -1,000 -20,500 26,600			
Jan. 31 Feb. 28 Mar. 31 Apr. 30 May 31 June 30 July 31 Aug. 31 Sept. 30 WTR YR 2005		112,700 120,400 138,200 178,100 201,100 203,500 202,100 181,700 160,300	-7,600 7,700 17,800 39,900 23,000 2,400 -1,400 -20,400 -21,400 -3,400			